How wet has this September been?

Description

The latter part of September saw some exceptional rainfall in parts of the UK which caused disruption and flooding at times.

With such a great deal of rain falling in a short period of time, some people have asked whether it will make September one of the wettest in our national records going back to 1910.

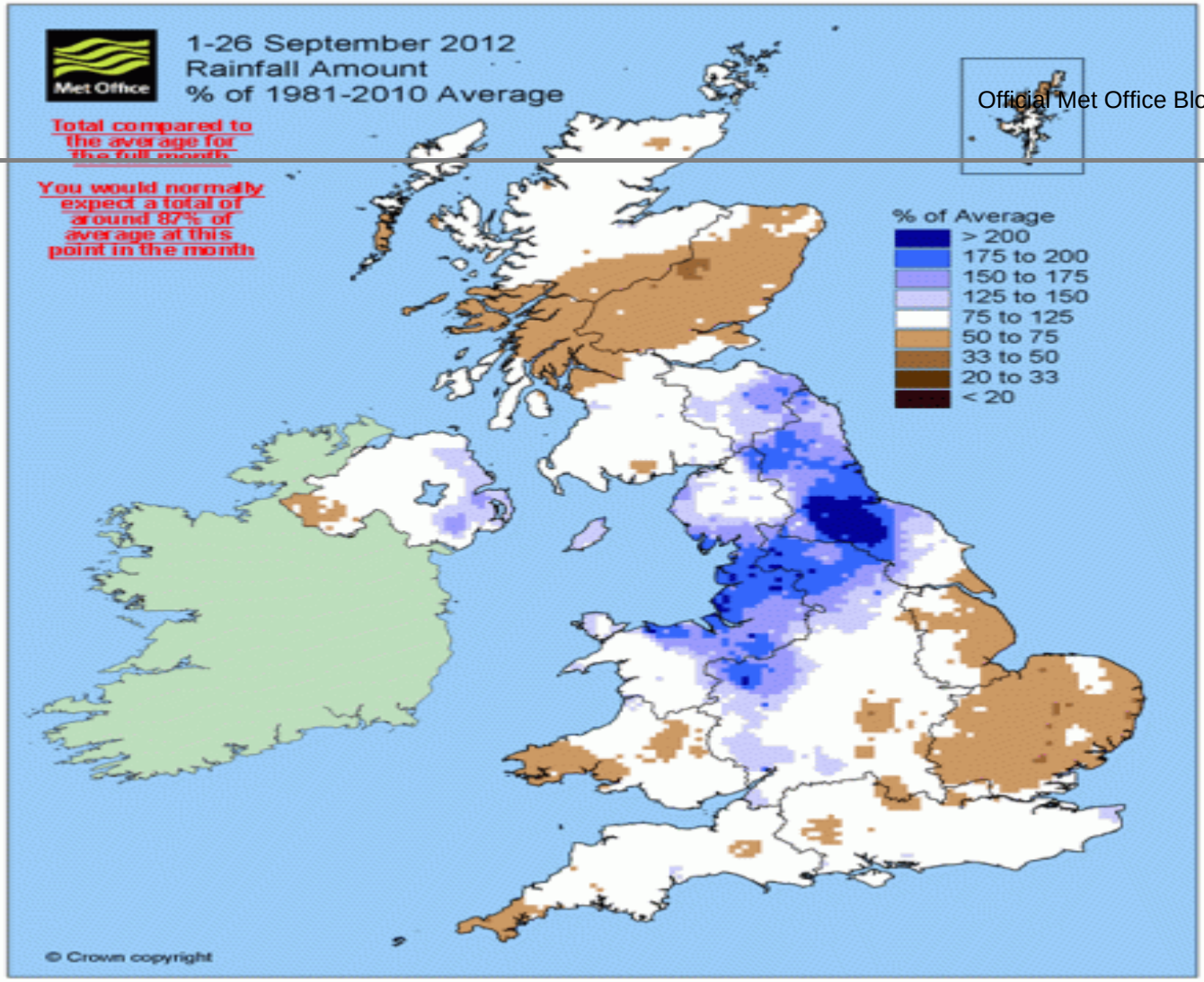
Provisional early statistics up to 26 September show this isn't the case, however, with the month looking set to be slightly wetter than average – but by no means a record breaker.

Up to the 26th, UK rainfall is 96.3 mm – which is 100% of the full month average. After 26 days we would, assuming rain falls fairly evenly through the month, expect this to be around 87%.

Of course, rain doesn't always fall evenly throughout a month – as we saw this September. The first three weeks saw relatively little rain in many areas, but then a particularly active weather system brought four days of persistent heavy rain.

Northern parts of England were particularly badly affected by this, as you can see in the rainfall map below. In the map you can see a band of blue colours across northern England denoting above average rainfall for the month, whereas much of the country is coloured white to denote near-average amounts.

Two brown areas, one across central Scotland and the other in East Anglia, show it has been drier than average here – even despite the heavy rain in the latter part of the month.


1-26 September 2012
Rainfall Amount
% of 1981-2010 Average
Total compared to the average for the full month
You would normally expect a total of around 87% of average at this point in the month
% of Average
> 200
175 to 200
150 to 175
125 to 150
75 to 125
50 to 75
33 to 50
20 to 33
< 20
© Crown copyright

Temperatures up to the 26 September are also fairly ordinary, being slightly below average. Mean temperature for the UK is 12.2 °C, which is 0.5 °C below the long-term average for the month.

While September looks set to be slightly wetter and cooler than average, the good news is sunshine hours were slightly up – with the UK having seen 126.1 hours of sunshine, 101% of its whole-month average.

Again, we'd expect it to be around 87% after 26 days, so we're ahead – but not by a record-breaking amount.

So this September is set to go down as a fairly average month overall, but – as is often the case – this belies some very stark contrasts and some less-than-usual weather.

Met Office provisional 1-26 September figures

	mean temperature		sunshine duration		rainfall	
	Actual	Difference from 1981-2010 average	Actual	% of 1981-2010 average	Actual	% of 1981-2010 average
	degC	degC	hours	%	mm	%

UK	12.2	-0.5	126.1	101	96.3	100
England	13.2	-0.5	145.2	106	80.6	116
Wales	12.1	-0.8	124.5	97	115.3	99
Scotland	10.4	-0.5	98.6	94	117.2	86
N Ireland	11.8	-0.5	105.3	93	94.0	103
England & Wales	13.1	-0.5	142.3	105	85.4	112
England N	12.4	-0.4	124.0	98	121.4	150
England S	13.7	-0.5	156.4	110	59.0	93

Date Created
October 2012

Provisional figures for September

Description

The provisional figures for the whole of September are in and, overall, the UK received 112.4mm of rain which is 117% of the long-term average. The wettest period of the month fell between the 23rd and 26th but with a very dry start to the month, the UK ended up 29th wettest in the national record that goes back to 1910.

The UK was also a little sunnier than usual, with 144.2 hours of sunshine, making it the 10th sunniest September on record. Meanwhile, the average temperature was 11.9°C which is 0.7°C below the 30-year average.

Met Office provisional September figures

	mean temperature		sunshine duration		rainfall	
	Actual	Difference from 1981-2010 average	Actual	% of 1981-2010 average	Actual	% of 1981-2010 average
	degC	degC	hours	%	mm	%
UK	11.9	-0.7	144.2	116	112.2	117
England	12.9	-0.8	165.8	121	87.8	126
Wales	11.9	-1.0	141.6	111	133.5	114
Scotland	10.3	-0.6	113.2	108	148.7	109
N Ireland	11.7	-0.7	120.4	106	104.1	113
England & Wales	12.8	-0.8	162.4	120	94.1	124
England N	12.2	-0.6	147.6	117	133.0	165
England S	13.4	-0.8	175.4	123	63.9	100

Date Created
October 2012

Using probabilities in weather forecasting

Description

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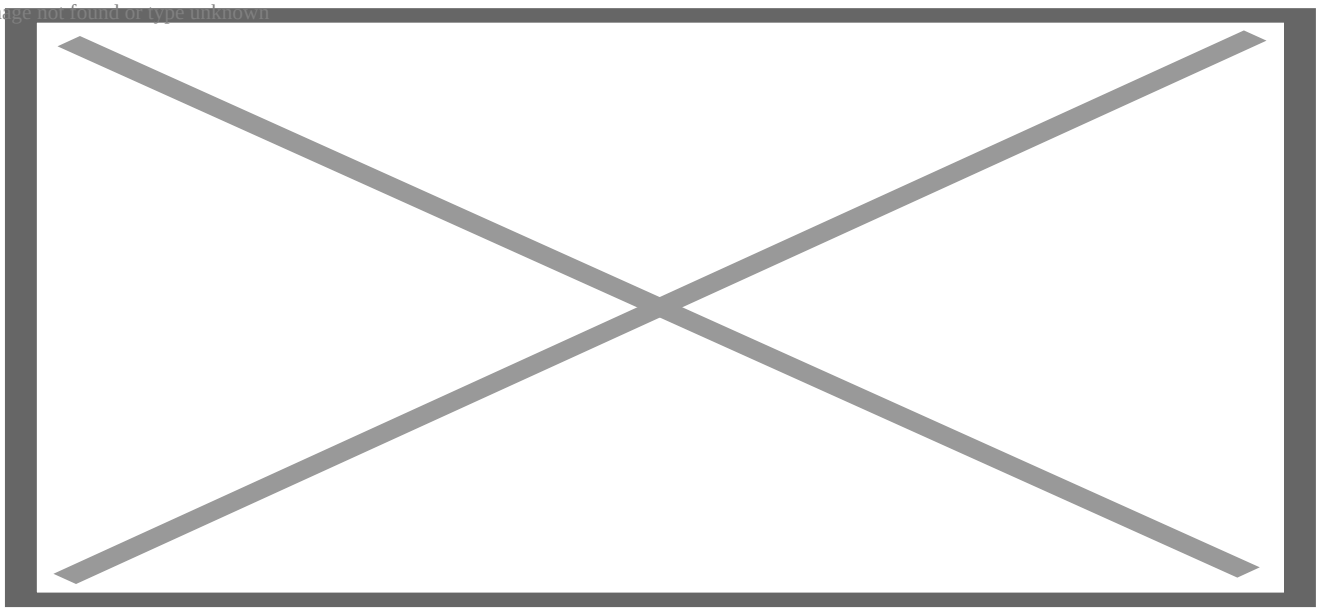


Predicting how the weather will behave over the coming hours, days, weeks and months is a complex undertaking. Each timescale presents its own challenges. In an ideal world, everyone would like us to tell them exactly what the weather will do so they can make definite decisions in their local area.

Nature, however, doesn't work like that. But one thing we can do is tell people about the probabilities of things happening.

In the short range, it is possible to predict with a high degree of accuracy what the weather has in store. However, the science does not exist to allow precise prediction of local details five days ahead. When severe weather may be on the way, it may be very unpredictable even in the short term. In these situations, uncertainty, or risk, becomes increasingly important in weather forecasting.

To forecast the weather we first gather observations from around the world to measure what the atmosphere is doing. We use these observations to set up a computer simulation of the atmosphere that represents what is happening right now. The model then calculates how the atmosphere will evolve over the coming days. Unfortunately, due to chaos, small unknowns in our observed atmosphere can grow rapidly to give large uncertainties in the forecast.

Over the last 15 years, the Met Office has developed sophisticated techniques to understand these uncertainties, called ensemble forecasts. This means we run our simulations many times instead ofjust once, from very slightly different starting conditions. The range of different outcomes gives us a measure of how confident or uncertain we should be in the overall forecast. On some occasions the uncertainty is quite small and we can be confident – other times much less so. This can help decision makers manage the risks associated with the weather.

Using ensembles is good science and it lets us give an indication of our certainty in a forecast. But it also presents us with a problem. How do we effectively communicate the forecast, both the bits we can be confident about and the areas where we are less confident? How can we communicate probabilities?

The Met Office is already beginning to provide more probability based information on its website. This includes information on the chance of rain and the possible range of maximum and minimum temperatures for our 5000 or so location forecasts available online. Furthermore we are using probability information within our National Severe Weather warnings and are at times supporting these with additional images and videos to explain possible severe weather.

Ken Mylne, Probability Weather Forecasting expert at the Met Office, will be presenting at the Royal Society conference 'Handling uncertainty in weather and climate prediction, with application to health, agronomy, hydrology, energy and economics' taking place today and tomorrow.

Date Created
October 2012

Met Office website widget to support local tourism

Description

Following the wettest summer in over a century, a north Devon tourism boss has suggested the Met Office delivers ‘pessimistic forecasts’. Although we can’t change the weather we’d like to help in any other way we can.

The Met Office has worked with the tourism industry in recent years to provide detailed forecasts for resorts, beaches and attractions with local forecasts for up to 5000 locations across the UK. All our forecasts provide local three-hourly detail of the weather with information on the chance of rain so that visitors can plan their day out with confidence and make the most of the great British weather come rain or shine.

We have also made these forecasts easier to access for holiday makers and attraction owners too. Such developments include our website widget which attraction owners can embed on their websites so that visitors can get instant access to the latest forecasts, warnings and observations. With a simple click the most up-to-date and accurate weather forecast, not just for today but for the next five day.

At the time of launch of these local forecasts, Mark Smith, Director of Bournemouth Tourism said: “These forecasts from the Met Office communicate weather forecast information in clearer, more appropriate and user friendly ways that allow tourists and tourism operators to better plan activities.”

In addition visitors can get our forecasts from our popular Android and iPhone Apps, mobile phones which allow you to get the latest weather forecast on the go, as well as on TV or on the radio.

The Met Office is trusted by the public to give the best possible guidance on the weather and we report the weather exactly as it is, so by putting our weather forecasts on tourist attraction websites, visitors can access the best weather forecasts available.

Related articles

- Man to sue Met Office for ‘pessimistic’ weather forecasts (itv.com)
- Tourist attraction boss threatens to sue Met Office over ‘series of overly pessimistic’ weather forecasts (dailyrecord.co.uk)
- Tourist attraction boss considers suing Met Office over ‘pessimistic’ weather forecasts (independent.co.uk)
- Met Office facing legal action over pessimistic forecasts (telegraph.co.uk)
- Tourist attraction may sue ‘pessimistic’ Met Office (telegraph.co.uk)
- Attraction boss may sue Met Office (express.co.uk)
- sue met office wrongly predicting bad weather (thesun.co.uk)

Date Created
October 2012

Nadine becomes second longest-lasting Atlantic tropical storm

Description

After travelling for over three weeks across the eastern Atlantic, Tropical Cyclone Nadine has finally dissipated to become absorbed into a larger low pressure system over the mid Atlantic.

The US National Hurricane Centre have declared that Nadine will tie with tropical storm Ginger of 1971 as the second-longest-lasting Atlantic tropical storm going back to 1851– lasting 21.25 days.

Nadine formed as a tropical depression on 11 September strengthening to become a tropical storm later the same day. Nadine became a hurricane on 28 September, lasting for four days.

Furthermore Nadine is likely to make the top five longest-lasting Atlantic tropical cyclones, which includes the tropical depression stage, at 21.75 days, just falling behind Kyle of 2002 at lasted 22 days, but well behind the longest lasting Atlantic tropical cyclone – San Ciriaco of 1899 which lasted for an astonishing 28 days.

Rank	Name	Date	Duration
1	San Ciriaco	August 1899	28 days
2	Ginger	September 1971	27.25 days
3	Inga	September 1969	24.75 days
4	Kyle	September 2002	22 days
5	Nadine	October 2012	21.75 days

Date Created
October 2012

Competition and offer: Weather Wonders and Extraordinary Weather books

Description

To celebrate the launch of Extraordinary Weather we are offering the chance to win a copy of both Extraordinary Weather and Weather Wonders.

If you would like to buy the book, there's also two special offers available to Met Office blog readers.

Readers can order Extraordinary Weather for the special price of £7.99 (rrp £9.99) with free UK postage and packaging by quoting promo code R3136 upon checkout. Alternatively Weather Wonders is available for the special price of £9.49 (rrp £12.99) by quoting R3136.

To order visit The Hobby Warehouse or call 0844 8805851.

Date Created
October 2012

Double rainbow – what does it mean?

Description

Photo: Matt Clarke

There’ve been lots of reports of rainbows and double rainbows this morning, but why do they occur?

Rainbows appear when sunlight passes through a raindrop causing it to be refracted, or bent. As the light passes through the drop, it is refracted at different angles causing the spectrum of colours from red to violet to be seen.

To see a rainbow, the sunlight needs to be behind you while a rain shower is in front of you. You can see a rainbow from a few metres to several kilometres away.

Double rainbows – sometimes called ‘rainbow hats’ – occur when a secondary rainbow forms outside of the brighter, primary rainbow. The colour sequence is reversed because the light has been reflected a second time. As the light has been refracted twice, the secondary rainbow will not be as bright.

Date Created
October 2012

How did the ‘Great Storm’ of 1987 develop?

Description

From the trail of devastation left by the ‘Great Storm’ of 1987, it’s clear that it was an unusual event.

Analysis of the storm suggests there had been nothing like it since 1703 and that it was an event so rare you would only expect a storm of that magnitude once every 200 years.

That does need clarifying, however, as we have seen storms as powerful as that before and since then – but they have affected areas which are more used to stormy weather such as the far north of the UK (like the north coast of Scotland) and far South West (like the Isles of Scilly).

So what was truly unusual about this storm was that it affected the South and East of England – which had an important bearing on the impact of the storm.

But how did the storm develop?

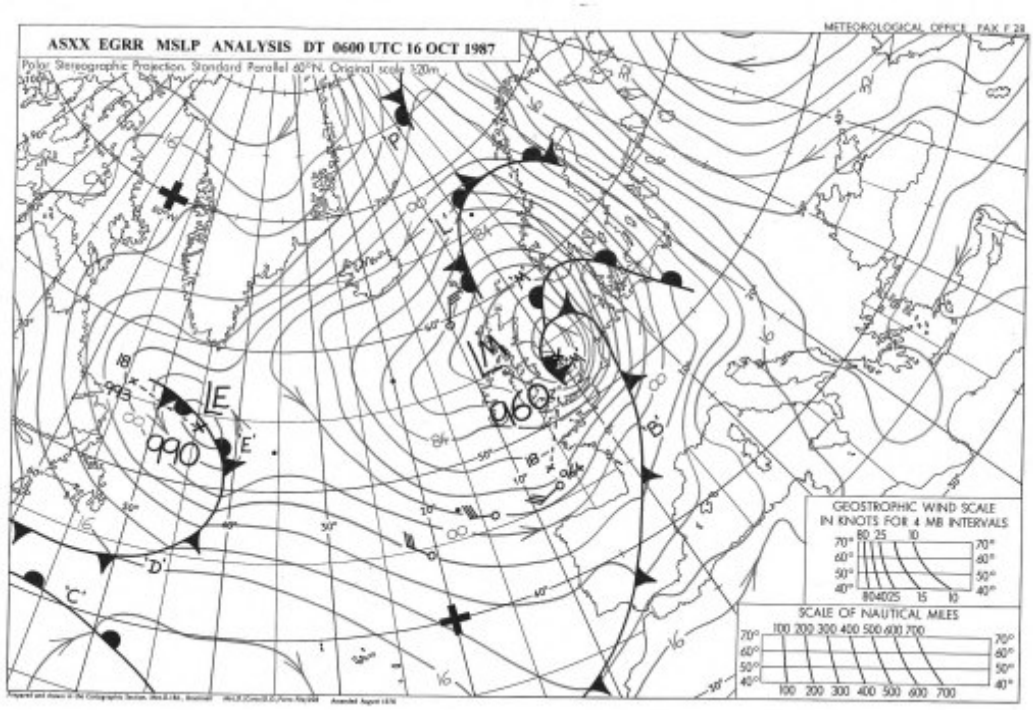
Initial phases

Most Autumnal storms head in from the Atlantic to the west of the UK, but this storm developed over the Bay of Biscay to the south.

It started as particularly warm tropical air and very cold polar air collided, forcing the warm air to rise and creating an area of low pressure.

The big difference in temperature between the warm and cold air helped to cause rapid ascent and therefore particularly low pressure – at one point it measured 951mb over the English Channel.

Crucially, just to the west of the low, pressure rose rapidly (due to descending air), to leave a big differential in pressure. You can see the difference in pressure in the tightly packed isobars in the (hand-drawn) chart from the early hours of 16 October 1987, below.


ASXX EGRR MSLP ANALYSIS DT 0600 UTC 16 OCT 1987
METEOROLOGICAL OFFICE FAX F 28
Polar Stereographic Projection. Standard Parallel 60°N. Original scale 1:20m
990
960
GEOSTROPHIC WIND SCALE
IN KNOTS FOR 4 MB INTERVALS
SCALE OF NAUTICAL MILES

Surface pressure chart for the morning of 16 October 1987

The atmosphere naturally tries to even out this pressure imbalance with the air flowing from the high pressure towards the low pressure – what we feel as wind

Much like water flowing down a plughole, that air doesn't rush in straight lines but spins around the centre of a low pressure until it reaches the middle due to the Coriolis effect.

The bigger the difference in pressure between the high and the low pressure, the faster the flow of air is – and in this case that big differential led to hurricane force winds.

A sting in the tail

We now know that the strength of the storm was boosted by a phenomenon known as the 'Sting Jet', where cold dry air descends into storms high in the atmosphere.

Rain or snow falling into this jet of air evaporates and cools the air further, adding more energy which translates into stronger winds. By the time this 'sting in the tail' reaches the ground it can produce winds of 100mph which are concentrated over a small area.

In 1987, no-one knew sting jets even existed, but now they are well understood and included in forecast models. The storm which affected Scotland in December 2011 was boosted by a sting jet, explaining the maximum gust speed of 164mph recorded on top of Cairngorm.

The combined impact

It's clear that several factors came together to make this storm particularly ferocious, but it was the track of the storm which was perhaps most significant.

Arriving on the south coast of the UK, it tracked north and east over the course of several hours before reaching the Humber estuary at about 5.30am.

This path took in a large, built-up and very populated part of the UK which exacerbated the damage caused.

Date Created
October 2012

Met Office in the Media: 14 October 2012

Description

An article by David Rose appears today in the Mail on Sunday under the title: ‘Global warming stopped 16 years ago, reveals Met Office report quietly released… and here is the chart to prove it’

It is the second article Mr Rose has written which contains some misleading information, after he wrote an article earlier this year on the same theme – you see our response to that one here.

To address some of the points in the article published today:

Firstly, the Met Office has not issued a report on this issue. We can only assume the article is referring to the completion of work to update the HadCRUT4 global temperature dataset compiled by ourselves and the University of East Anglia’s Climate Research Unit.

We announced that this work was going on in March and it was finished this week. You can see the HadCRUT4 website here.

Secondly, Mr Rose says the Met Office made no comment about its decadal climate predictions. This is because he did not ask us to make a comment about them.

You can see our full response to all of the questions Mr Rose did ask us below:

Hi David,

Here’s a response to your questions. I’ve kept them as concise as possible but the issues you raise require considerable explanation.

Q.1 “First, please confirm that they do indeed reveal no warming trend since 1997.”

The linear trend from August 1997 (in the middle of an exceptionally strong El Nino) to August 2012 (coming at the tail end of a double-dip La Nina) is about 0.03°C/decade, amounting to a temperature increase of 0.05°C over that period, but equally we could calculate the linear trend from 1999, during the subsequent La Nina, and show a more substantial warming.

As we’ve stressed before, choosing a starting or end point on short-term scales can be very misleading. Climate change can only be detected from multi-decadal timescales due to the inherent variability in the climate system. If you use a longer period from HadCRUT4 the trend looks very different. For example, 1979 to 2011 shows 0.16°C/decade (or 0.15°C/decade in the NCDC dataset, 0.16°C/decade in GISS). Looking at successive decades over this period, each decade was warmer than the previous – so the 1990s were warmer than the 1980s, and the 2000s were warmer than both. Eight of the top ten warmest years have occurred in the last decade.

Over the last 140 years global surface temperatures have risen by about 0.8ºC. However, within this record there have been several periods lasting a decade or more during which temperatures have risen very slowly or cooled. The current period of reduced warming is not unprecedented and 15 year

long periods are not unusual.

Q.2 “Second, tell me what this says about the models used by the IPCC and others which have predicted a rise of 0.2 degrees celsius per decade for the 21st century. I accept that there will always be periods when a rising gradient may be interrupted. But this flat period has now gone on for about the same time as the 1980 – 1996 warming.”

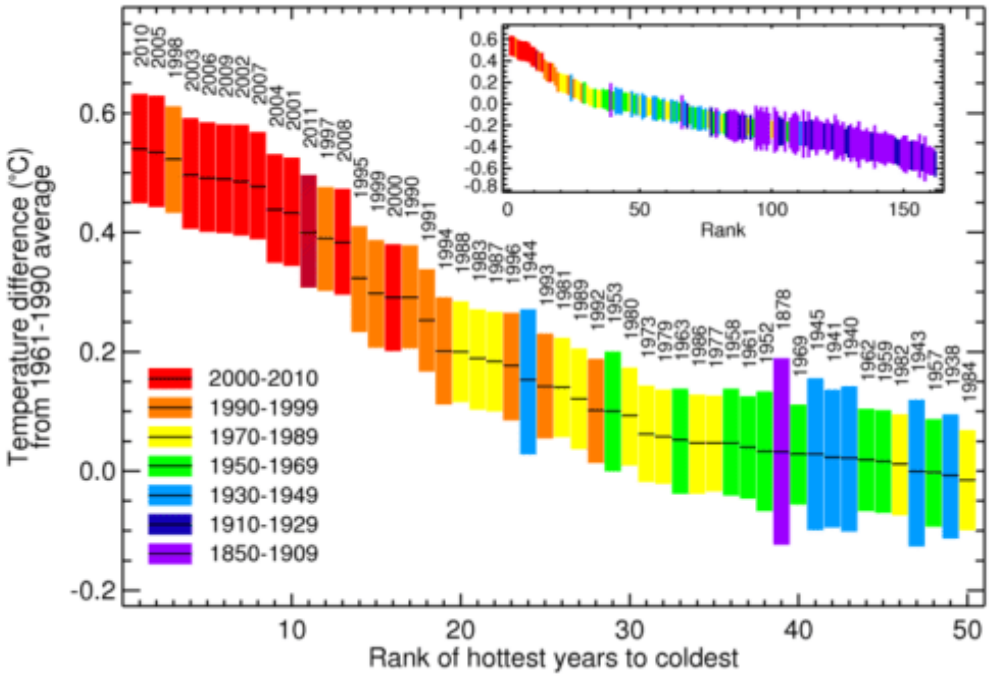
The models exhibit large variations in the rate of warming from year to year and over a decade, owing to climate variations such as ENSO, the Atlantic Multi-Decadal Oscillation and Pacific Decadal Oscillation. So in that sense, such a period is not unexpected. It is not uncommon in the simulations for these periods to last up to 15 years, but longer periods are unlikely.

Q.3 “Finally, do these data suggest that factors other than CO2 – such as multi-decadal oceanic cycles – may exert a greater influence on climate than previously realised?”

We have limited observations on multi-decadal oceanic cycles but we have known for some time that they may act to slow down or accelerate the observed warming trend. In addition, we also know that changes in the surface temperature occur not just due to internal variability, but are also influenced by “external forcings”, such as changes in solar activity, volcanic eruptions or aerosol emissions. Combined, several of these factors could account for some or all of the reduced warming trend seen over the last decade – but this is an area of ongoing research.

_____

The below graph which shows years ranked in order of global temperature was not included in the response to Mr Rose, but is useful in this context as it illustrates the point made above that eight of the warmest years on record have occurred in the past decade.



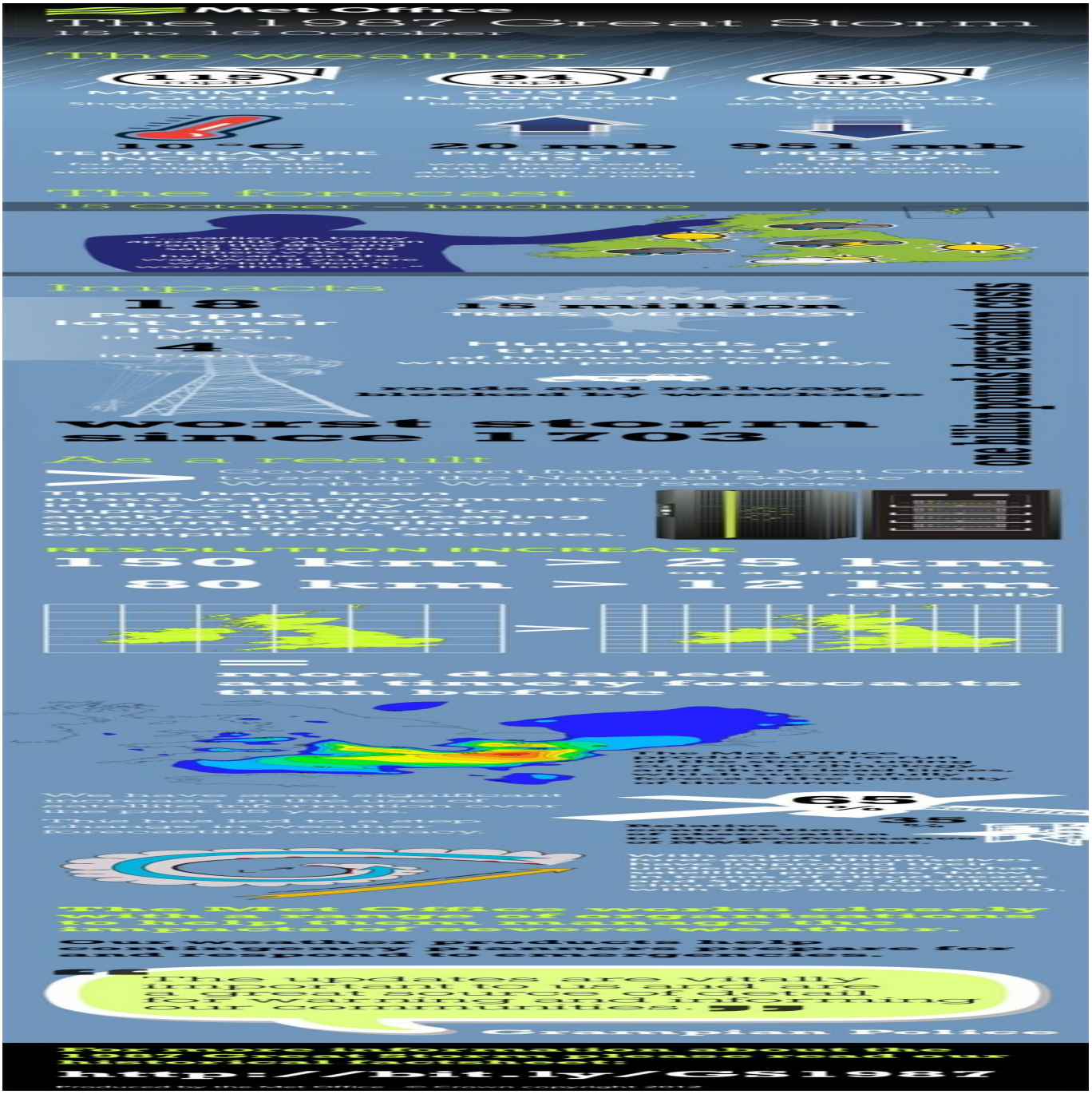
Graph showing years ranked in order of global temperature.

Date Created
October 2012

Infographic: The Great Storm of 1987

Description

The Great Storm of 1987 remains one of the most talked about weather events for a generation, it even featured in the Olympic Opening Ceremony. Twenty five years on, the storm has led to numerous improvements to the science, technology and communication of forecasting which has transformed the way the UK responds to severe weather.



Date Created

October 2012

Top ten coldest recorded temperatures in the UK

Description

This lists the lowest temperatures recorded in separate cold spells since 1961.

	Date	Station	Area	Temperature
1	10 January 1982	Braemar	East Scotland	-27.2 °C
1	30 December 1995	Altnaharra No 2	North Scotland	-27.2 °C
3	13 December 1981	Shawbury	Midlands	-25.2 °C
4	13 January 1979	Carnwath	West Scotland	-24.6 °C
5	20 January 1984	Grantown-On-Spey	East Scotland	-23.6 °C
6	27 January 1985	Lagganlia	North Scotland	-23.4 °C
7	13 January 1987	Caldecott P Sta	Midlands	-23.3 °C
8	08 January 2010	Altnaharra No 2	North Scotland	-22.3 °C
9	18 February 1960	Grantown-On-Spey	East Scotland	-22.2 °C
9	30 December 1961	Cannich	North Scotland	-22.2 °C
9	18 January 1963	Braemar	East Scotland	-22.2 °C

- The lowest temp of -27.2 °C is shared between 30 December 1995 and 10 January 1982.
- On the 10th January 1982, 26.1 °C was also recorded in Newport (Salop) in the Midlands.
- January 1982 was the most widespread occurrence of temperatures below -20 °C.
- Temperatures below -20 °C are much rarer for Wales, the coldest temperature recorded for Wales was -22.7°C in Corwen, North Wales on 13 December 1981.
- Temperatures below -20 °C are most common at stations in East Scotland followed by North Scotland and the Midlands in England.

More UK climate statistics on our website.

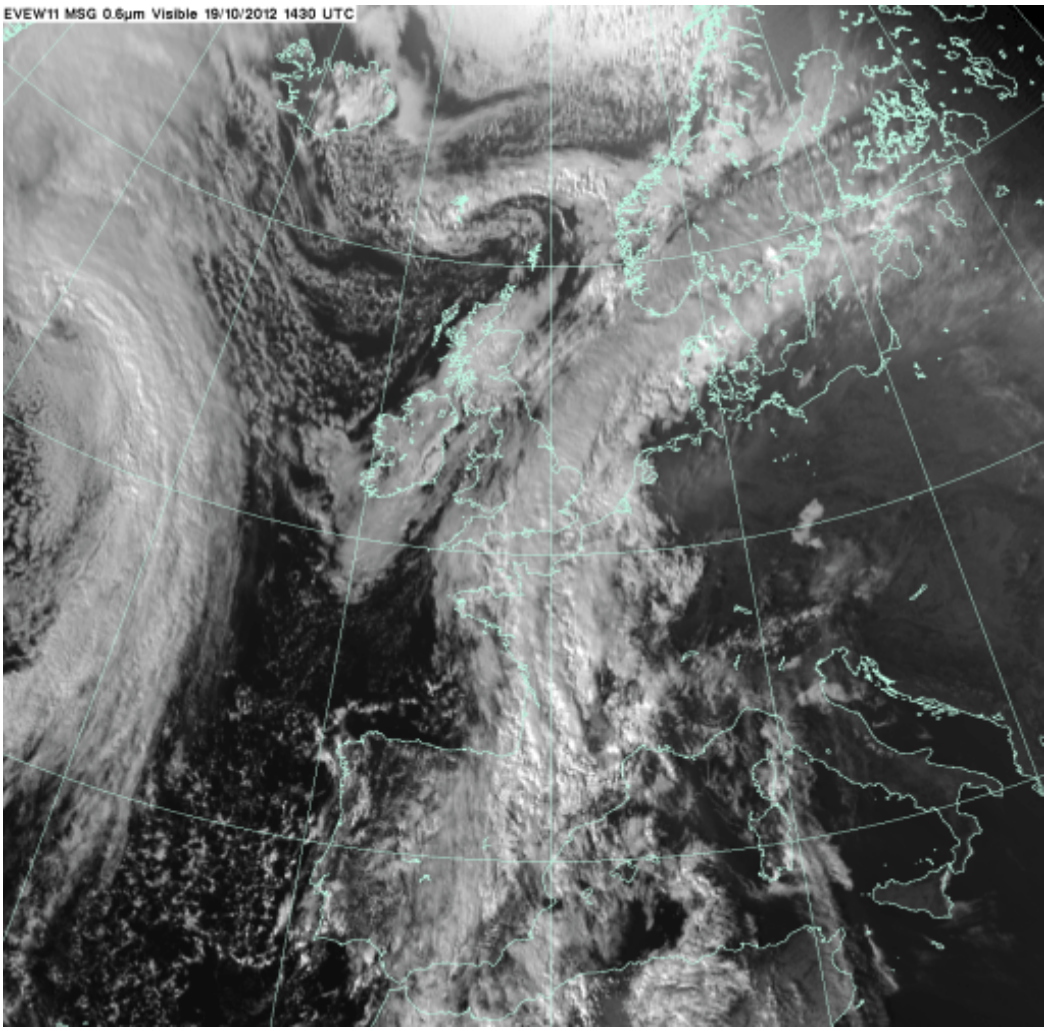
Date Created
October 2012

Severe weather expected in parts of Spain and southern France

Description

This weekend looks set to be a very wet one over parts of Spain and southern France as very warm, humid air and an active weather front combine to bring heavy rain and thunderstorms.

The frontal system stretches from Scandinavia, across southeastern Britain to North Africa and it's on the southern side of this that we are likely to see torrential, thundery downpours bringing the risk of flash flooding.



Visible satellite image 3.30pm 19 October 2012

Southeastern Spain, from Murcia to Valencia and Cuenca, may see some of the heaviest rain on Saturday, but it’s the north and east of Spain and parts of southern France that are most at risk from the torrential downpours through the weekend. Here there could be 100 to 200 mm of rain falling in a short space of time across quite a wide area, with the risk of up to 300 mm of rain possible in places.

Some severe thunderstorms are also likely across parts of Morocco and Algeria, with gusty winds generating dust storms.

Date Created
October 2012

Guest Blog: Ready for Winter?

Description

Lynda Nicholson from Scottish Government talks about the launch of this years Ready for winter? Campaign.

Today the Scottish Government launched its new Ready for Winter? campaign designed to get Scotland more prepared for severe weather of all types. Following the cold winters in 2009 and 2010, and a wet summer this year, it's becoming more apparent that severe weather can strike at any time and not all of us are prepared.

In fact, new research from the British Red Cross and the Scottish Government showed that only 39% per cent of people said that they were prepared for periods of severe weather, and 76% think they are doing enough to prepare for poor driving conditions with just an ice-scraper and de-icer.

The Ready for Winter? campaign sets out what you really need to do and focuses on how we can get ready at home, at work, in the community and when we're on the move. It's not difficult or expensive to get ready, just a few small steps now can save a lot of trouble later. By thinking ahead, acting now and considering the likely consequences for your family, business or neighbourhood, we can make sure fewer people get caught out should severe weather hit.

You can get the latest weather forecasts and warnings from the Met Office so you know when severe weather is expected, taking small steps now means you will be ready when cold weather arrives.

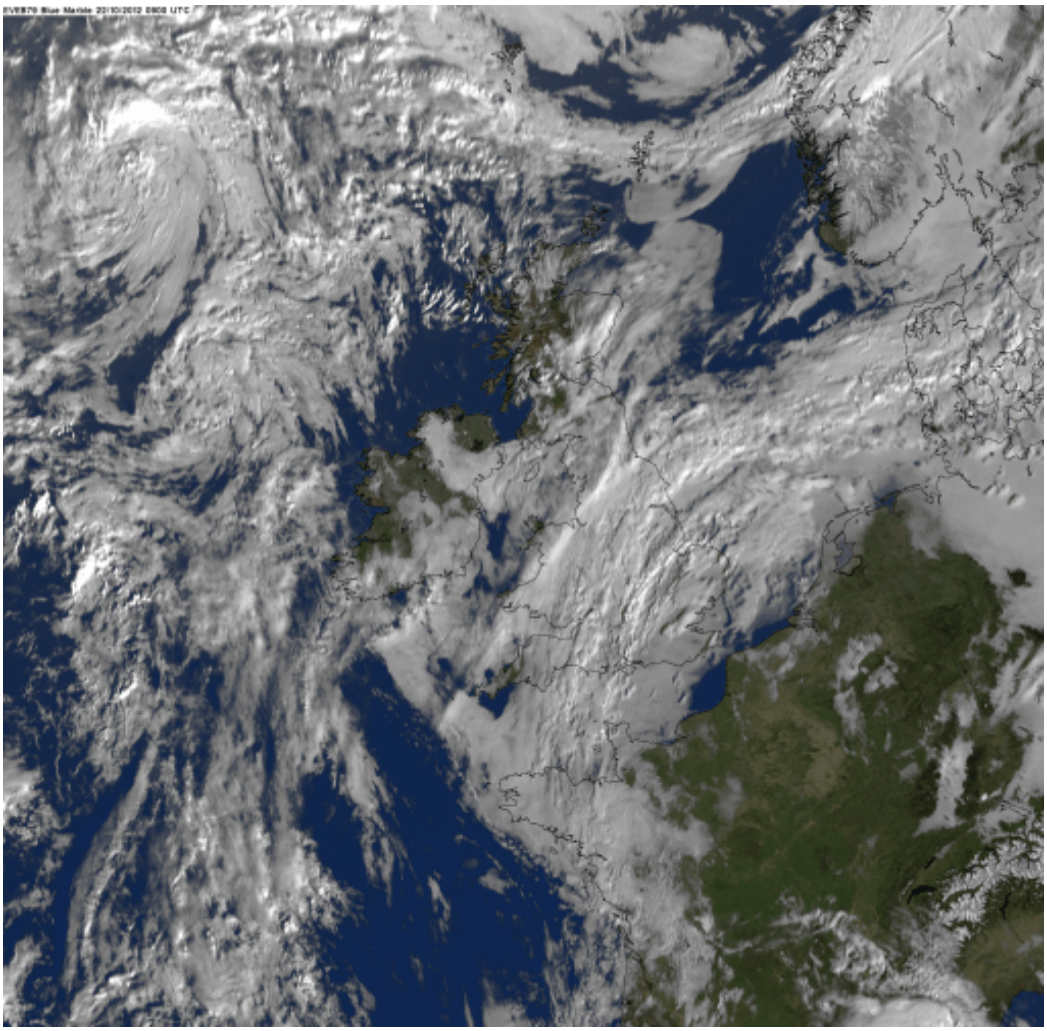
If you want to know more about what you should do, visit Ready Scotland for information and advice.

Date Created
October 2012

Turning colder this weekend

Description

There have been many references in the media to the UK having an Indian summer this week, with temperatures expected to reach 20 °C. However, as forecast by the Met Office many of us woke up today to rather grey, misty and drizzly skies and although temperatures are well above average for the time of year, it certainly doesn't look or feel summery outside for most of us. We have also seen widespread mist and fog overnight across England and Wales, which the Met Office warned for over the weekend, and further foggy conditions are expected for the next couple of nights.



Visible satellite image from 0900 22 October 2012

So are we going to see any sunshine at all this week? Well, yes, the cloud should break in some places, and we may even see temperatures rise to the high teens along the south coast of England at times, but these temperatures will be short lived.

For most of us it will be the end of the week before the sunshine returns and when it does the weather will be far from warm.

By Friday, much colder air from the Arctic will spread across the UK, bringing drier and clearer weather but much lower temperatures. In fact, daytime highs will struggle to reach double figures by the weekend and there may even be a few wintry showers across north-eastern parts of the UK. It will be cold and frosty overnight too and for many of us this will be the first cold snap of the season.

In this video, Deputy Chief Forecaster Baden Hall explains exactly what we can expect over the next few days.

The latest information about the weather and warnings can be found on the Met Office website, iPhone and Android apps and on twitter. Cold weather can also have an impact on people's health and you can find out more on the Met Office's Cold weather and health web pages.

Date Created
October 2012

Top ten: Mildest temperatures recorded last night

Description

Yesterday was a mild day with temperatures reaching as high as 19.2 °C, which was recorded in Langdon Bay during the daytime. However night-time temperatures were also mild for the time of year, with many areas not dropping below 10 °C. Jersey was particularly warm, not falling below 13.5 °C last night.

Station	Temperature (°C)
Jersey: Airport	13.5
Bognor Regis	12.9
Guernsey: Airport	12.9
Langdon Bay	12.1
Manston	12.1
Frittenden	11.9
Herstmonceux, West End	11.9
Faversham	11.8
Scilly: St Marys Airport	11.7
Skegness	11.7

Overnight lows at this time of year would typically be around 7 to 9 °C across southern England, making last night around 4 or 5 °C milder than average. More UK climate and weather statistics are available on our website.

Date Created
October 2012

Tropical Storm Sandy heading for Jamaica and Cuba

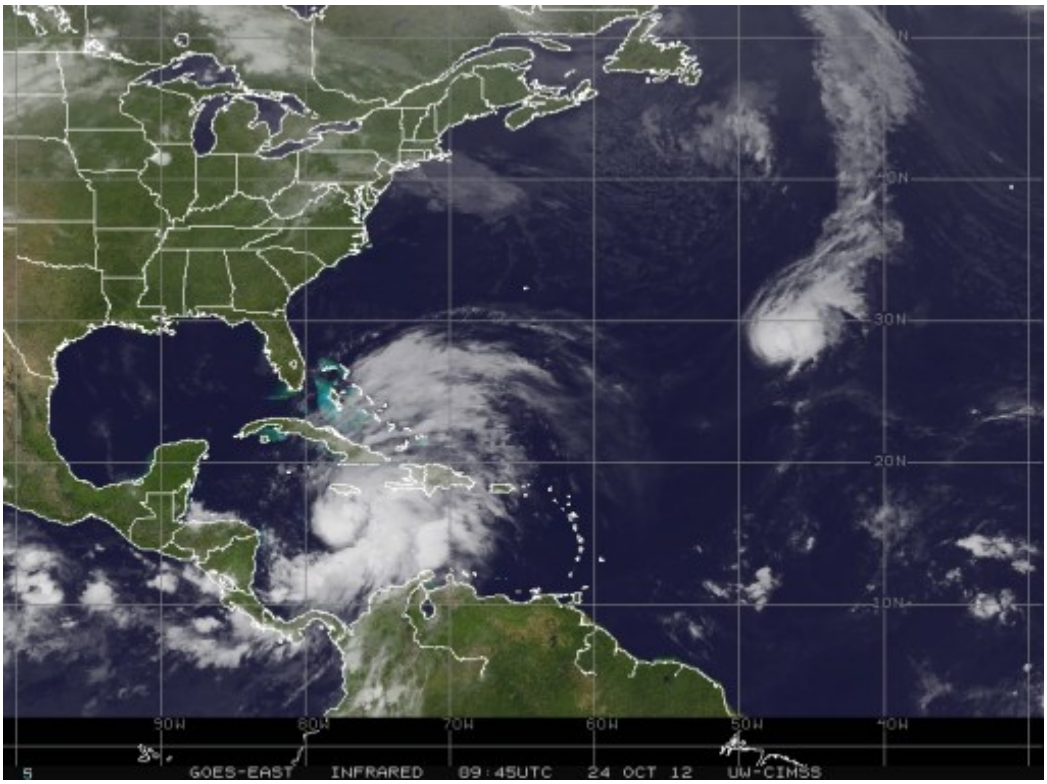
Description

It may be late October, but the Atlantic hurricane season is still in full swing. At this time of year the strongest storms usually develop in the Caribbean Sea and this is where Tropical Storm Sandy has been gathering strength in the last couple of days.

Sandy could reach hurricane strength before making landfall over Jamaica later today bringing winds of up to 75 mph and 150 to 300 mm rain. Sandy may not strengthen much once it hits the land but is then expected cross Cuba and the Bahamas, giving Haiti a glancing blow on the way.

Sandy is then likely move north and bring strong winds and torrential rain to southeast Florida for a time before it develops into a deep Atlantic low pressure system with the possibility of bringing wet and windy conditions to north-eastern USA or eastern Canada early next week.

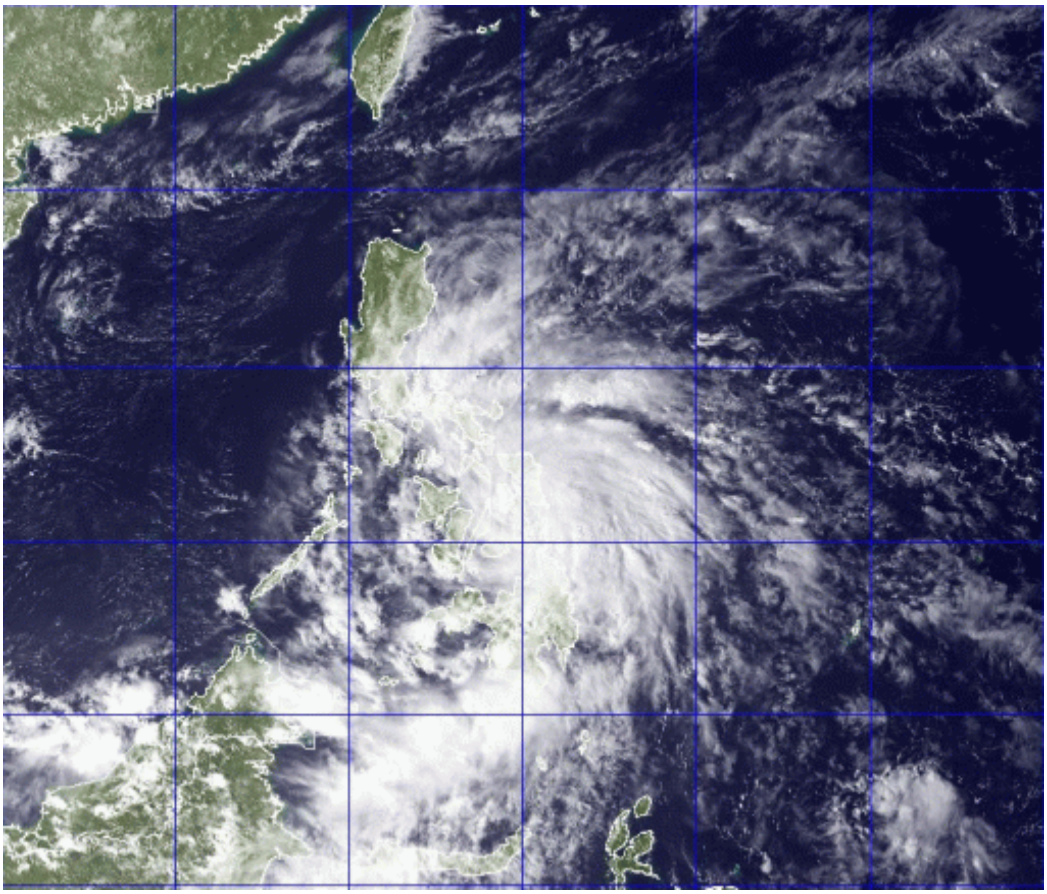
Further out in the Atlantic Tropical Storm Tony has developed. Although no threat to land, Tony is the 19th storm of the 2012 Atlantic season equalling the tally of both the 2011 and 2010 seasons.



Tropical Storms Sandy and Tony

Meanwhile, a tropical depression has developed in the Arabian Sea and looks set to bring rain to Somalia in eastern Africa in the next couple of days. If it does strengthen into a tropical storm, it will be the first storm in the northern Indian Ocean in 2012.

In the western Pacific Tropical Storm Son-Tinh is bringing wet and windy weather to the southern islands of the Philippines including Mindanao. This will bring back memories of last year's Tropical Storm Washi which caused devastation in this region. Son-Tinh is likely to continue its track across the South China Sea and make a further landfall at the weekend over Vietnam or southern China.



Tropical Storm Son-Tinh

You can keep up to date with tropical cyclones around the world on our website or follow us on Twitter.

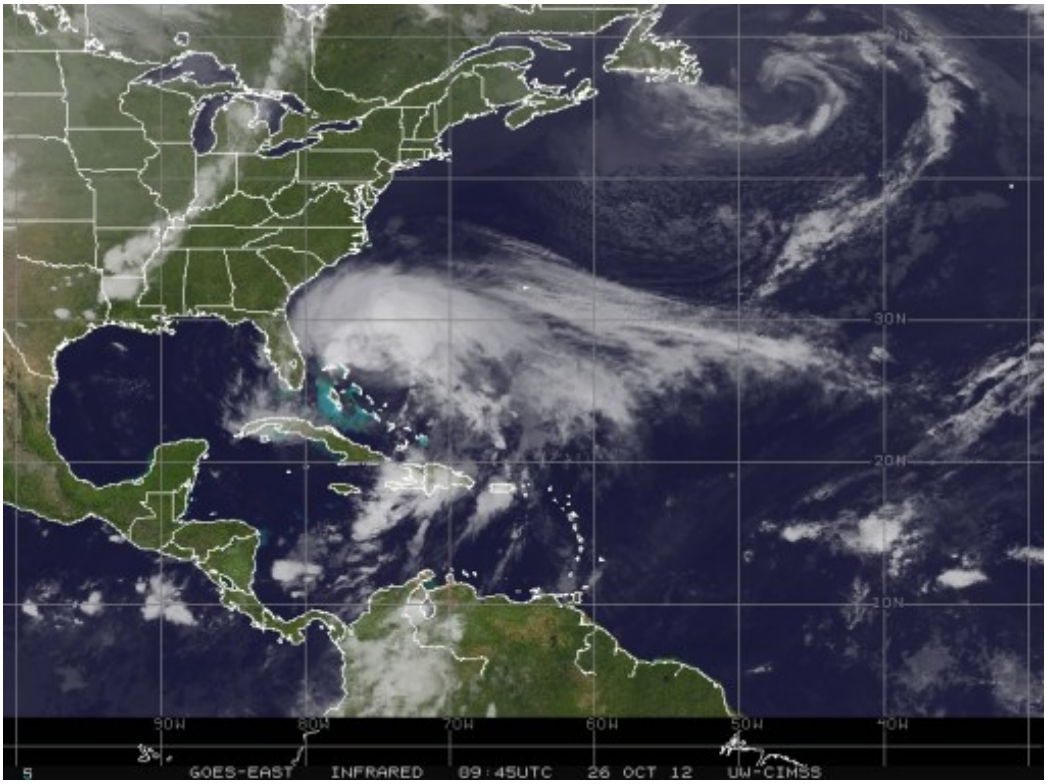
Date Created
October 2012

Hurricane Sandy threatens severe weather for US East Coast

Description

Over the last two days Hurricane Sandy has cut a swathe through the Caribbean bringing strong winds, heavy rain and storm surge to Jamaica, Cuba, Haiti and the Bahamas. At least 20 people have been killed, properties damaged and flooded and at one point large parts of Jamaica were without power.

Hurricane Sandy is now moving away from the Bahamas, but is still very close to the south-east coast of the USA. The east coast of Florida is experiencing stormy conditions as Sandy moves northwards over the Atlantic Ocean.

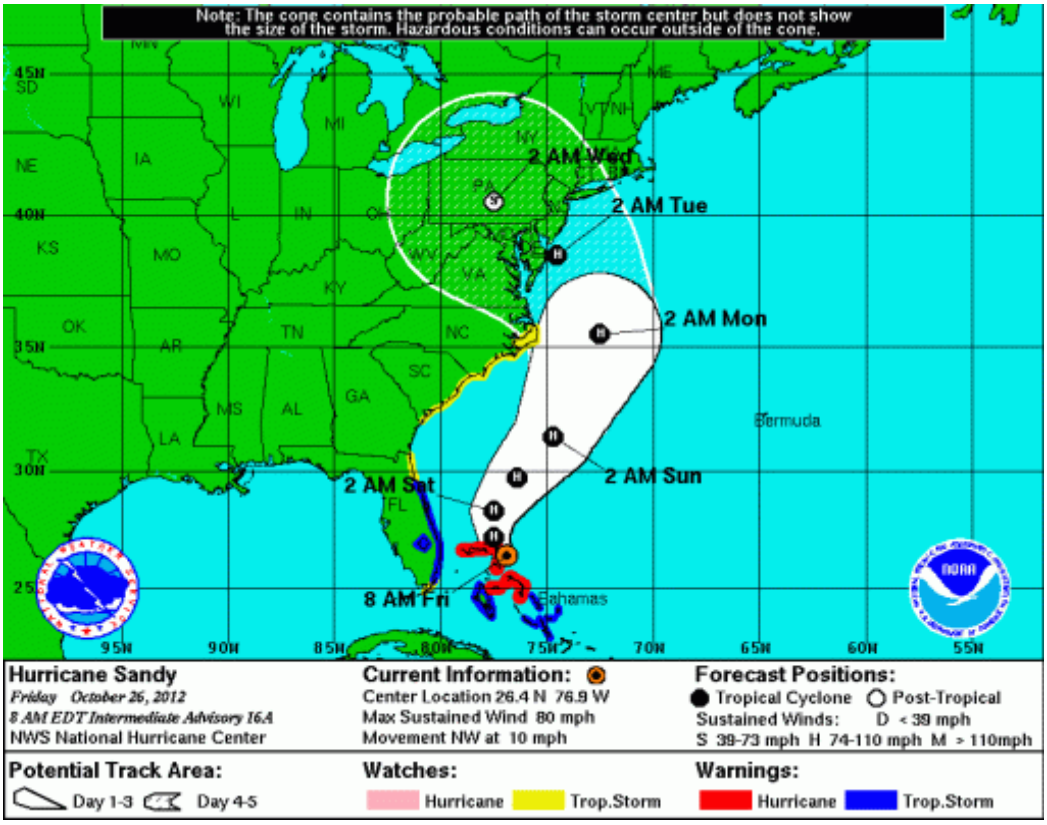


Hurricane Sandy 26 October 2012

Sandy looks likely to turn north-west early next week and impact parts of the mid-Atlantic and north-eastern USA as did last year's 'Halloween Nor'easter' storm of 2011 and the 'Perfect Storm' of 1991. As Sandy approaches land the warm moist air circulating within the hurricane looks sets to meet cold air spreading south into the north-eastern USA from Canada. This provides the potential for the storm to develop further and produce severe winds, heavy rain, flooding and even snow on its north and west flanks as it hits land.

Uncertainties remain as to the precise location and timing of landfall. However, the area most likely to be affected stretches from the states of Maryland to Massachusetts, including the populous cities of

Washington DC, Baltimore, Philadelphia, New York and Boston.



Official National Hurricane Center Forecast for Sandy on Friday 26 October

The National Hurricane Center (NHC) and the US Federal Emergency Management Agency (FEMA) are providing warnings and advice to those who are potentially at risk from the storm. The Met Office routinely supplies predictions of hurricane tracks from its global forecast model to NHC which it uses along with guidance from other models in the production of its forecasts and guidance.

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Date Created
October 2012

Met Office in the Media: 29 October 2012

Description

Today there a couple of news stories (one in the Express and another in the Daily Star) which refer to the ‘Met Office winter forecast’, but they create a slightly misleading picture.

They seem to be based on our three-month outlook for contingency planners, a product which is updated each month and is available to view on our website. There are a couple of points to mention here.

Firstly the current three-month outlook covers November to January, so does not cover a full winter period. Meteorologically speaking, winter runs from December to February – so a full look at winter won’t be available until towards the end of next month.

The second point is that the three-month outlook is designed for contingency planners – those people making longer-term strategic resourcing decisions based on their preferred exposure to risk. It’s a complex product which shows the range of probabilities for temperatures and precipitation for the whole of the UK over the three-month period.

It is not, therefore, the sort of forecast that the public find useful when making decisions, such as deciding when to go on holiday.

Specifically looking at the current three-month outlook for both temperature and precipitation, both clearly state there are currently relatively few large-scale influences and, therefore, there is low confidence in the forecast.

While the Met Office is a world leader in longer-range forecasting and we continue to make improvements in this area, it is still a developing area of meteorology.

As ever, our highly accurate five-day forecasts and weather warnings provide the best possible advice and detail on what weather to expect in the UK. These can be used alongside our 30-day outlook, which gives a more general view of the weather ahead over a longer-timescale.

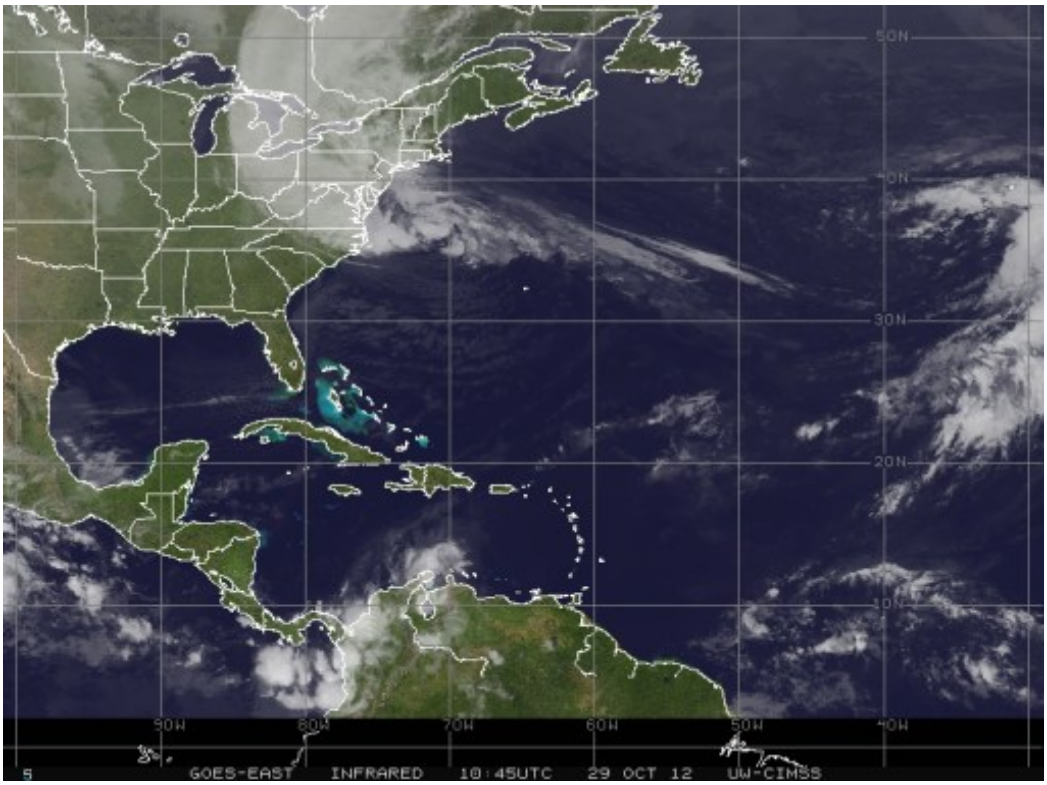
Date Created
October 2012

Hurricane Sandy heads for the northeast USA

Description

As many as 60 million people across 12 US states are thought to be in the path of Hurricane Sandy, which has been given the nickname “Frankenstorm”.

Hurricane Sandy is currently moving northward, parallel to the US East Coast, and is expected to make a turn towards the northeast US coast later on today. However, strong winds and stormy conditions are already being felt from North Carolina to New York.



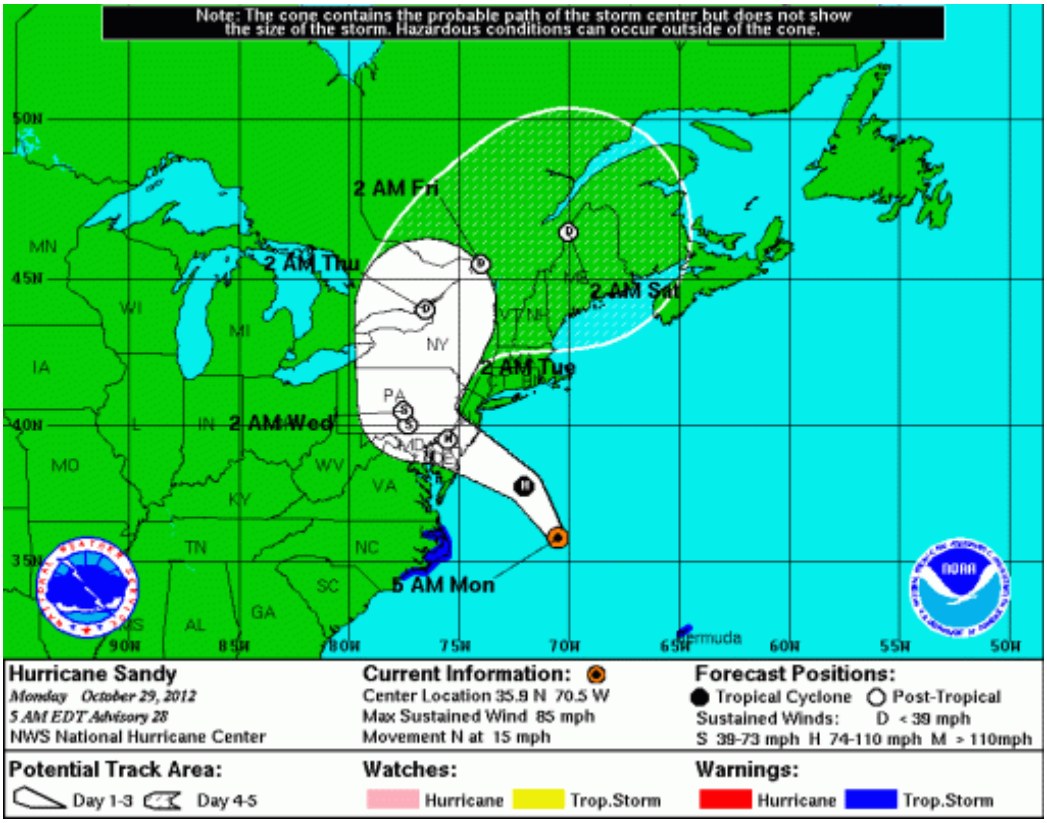
Hurricane Sandy heads towards the northeast coast of the USA 29 October 2012

Sandy looks set to impact parts of the mid-Atlantic and north-eastern USA like last year’s ‘Halloween Nor’easter’ storm of 2011 and the ‘Perfect Storm’ of 1991. As Sandy approaches land the warm moist air circulating within the hurricane will meet cold air spreading south into the north-eastern USA from Canada. This provides the potential for the storm to develop further and produce severe winds, heavy rain, flooding and even snow on its north and west flanks as it hits land.

Uncertainties remain as to the precise location and timing of landfall. The latest forecast from the National Hurricane Center takes Sandy over the Mid-Atlantic states, very close to Delaware and New Jersey, later on tonight or Tuesday morning. However, due to the large size of the storm (around 600 miles across), the impacts from Sandy will be widespread and not just limited to where the centre of

the storm makes landfall.

Storm surge, combined with high tide, could cause extensive flooding to low lying areas, between 4 and 8 inches of rain could fall over portions of the northeast coast and 2 to 3 ft of snow is expected in the mountains of West Virginia.



Official National Hurricane Center forecast for Sandy on Monday 29 October 2012

This is the second time in two years that New York will have been impacted by a tropical system. Only last year Hurricane Irene travelled up the east coast of the US and made landfall with winds of 65 mph in Brooklyn, New York. However, Sandy could have a larger impact than Irene due to it's larger size, stronger winds and greater storm surge.

Hurricane Sandy has already cut a swathe through the Caribbean, bringing strong winds, heavy rain and storm surge to Jamaica, Cuba, Haiti and the Bahamas. At least 60 people have been killed, properties damaged and flooded, and large parts of Jamaica were left without power.

The National Hurricane Center and the US Federal Emergency Management Agency (FEMA) are providing warnings and advice to those who are potentially at risk from the storm. The Met Office routinely supplies predictions of hurricane tracks from its global forecast model to NHC which it uses along with guidance from other models in the production of its forecasts and guidance.

You can keep up to date with tropical cyclones around the world on our website or follow us on Twitter.

You can find out how tropical cyclones, including hurricanes, form in this video

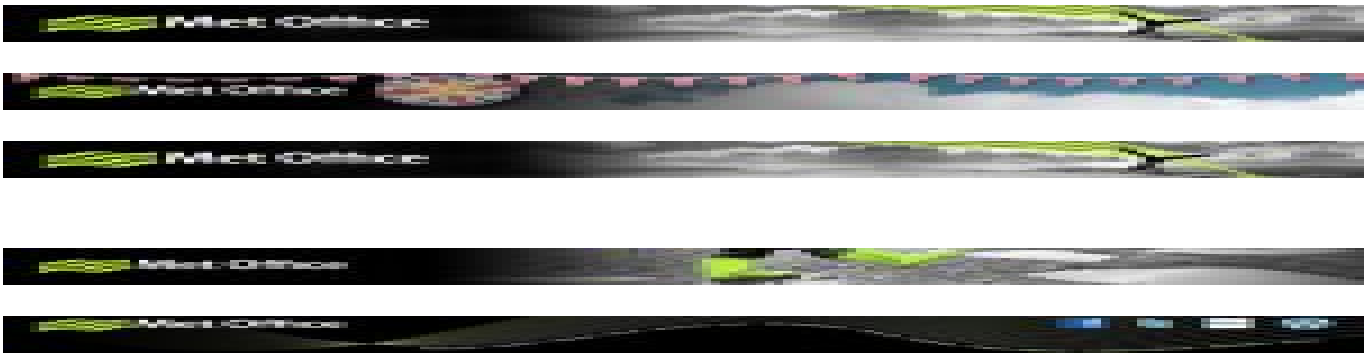
Date Created

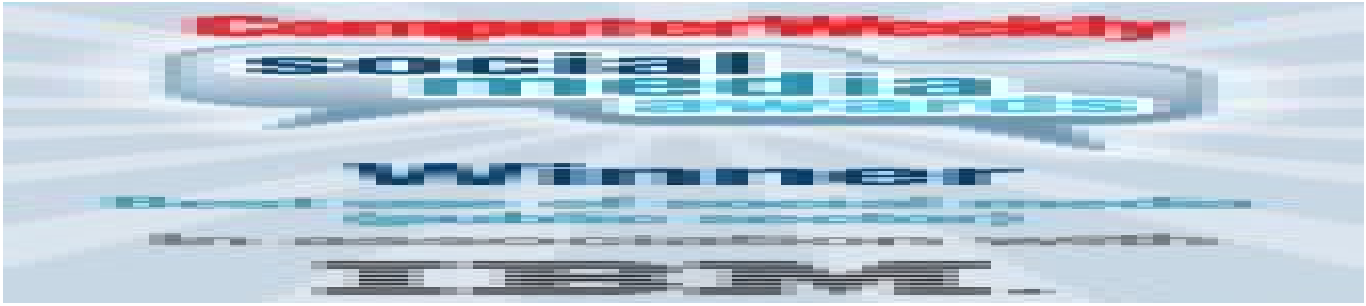
October 2012

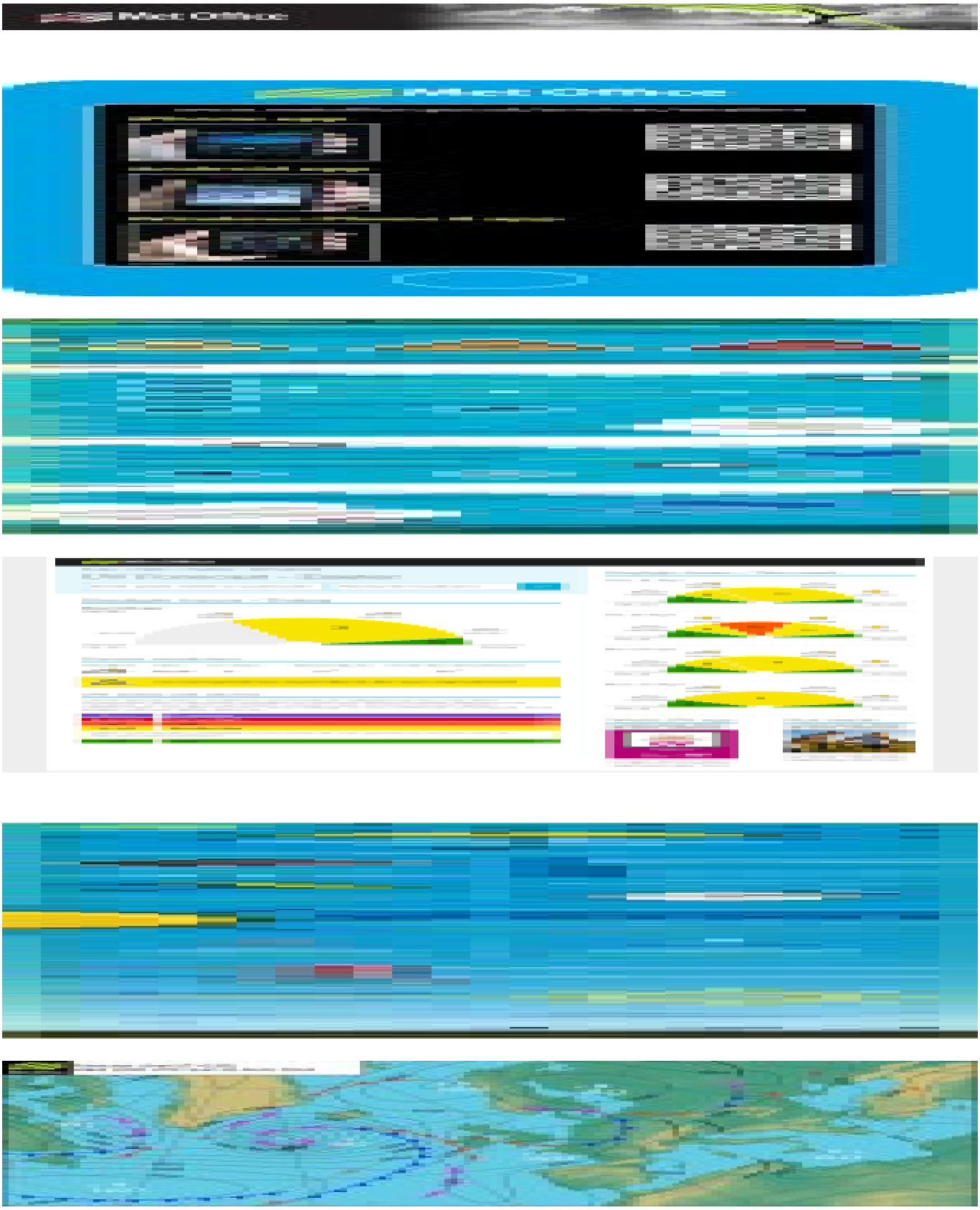
Top ten: spookiest weather conditions

Description

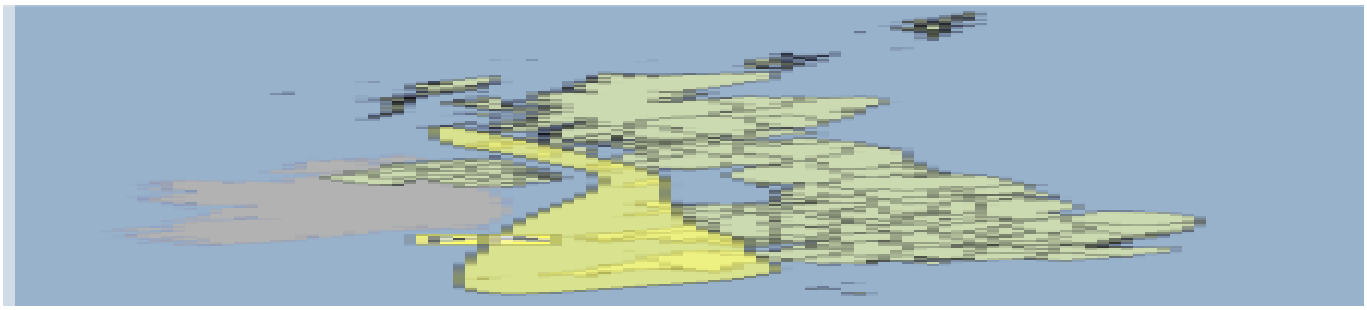
As it's halloween tomorrow, we've taken a look at the top ten spookiest weather conditions. From well known scary weather – like thunder and lightning and sea mist, to lesser-known phenomena such as brocken spectre and fall streak holes.



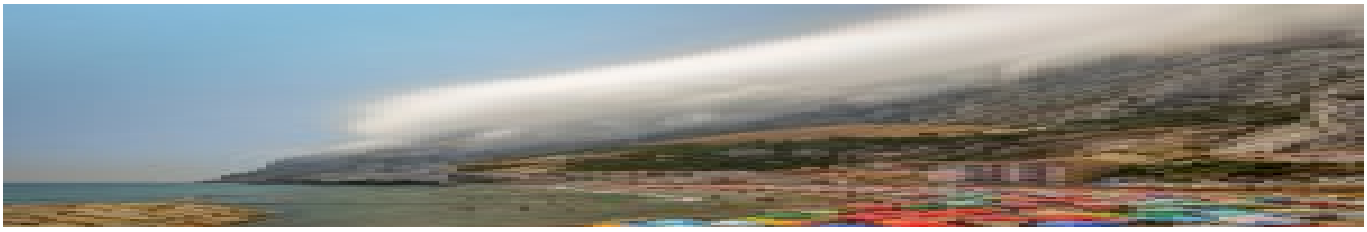




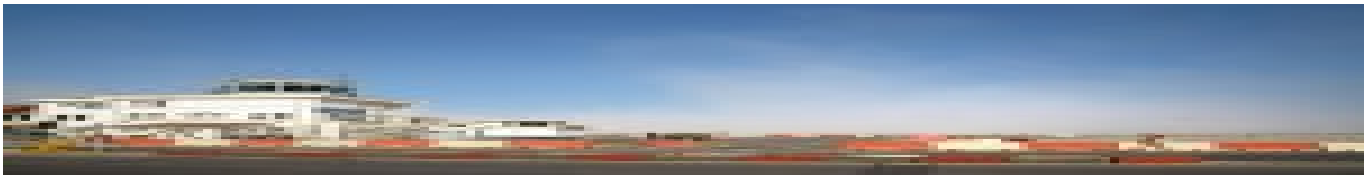
Forecast pressure chart for 1pm on Sunday 31 August shows ex-Cristobal heading towards Iceland.



Dual warning for wind and rain



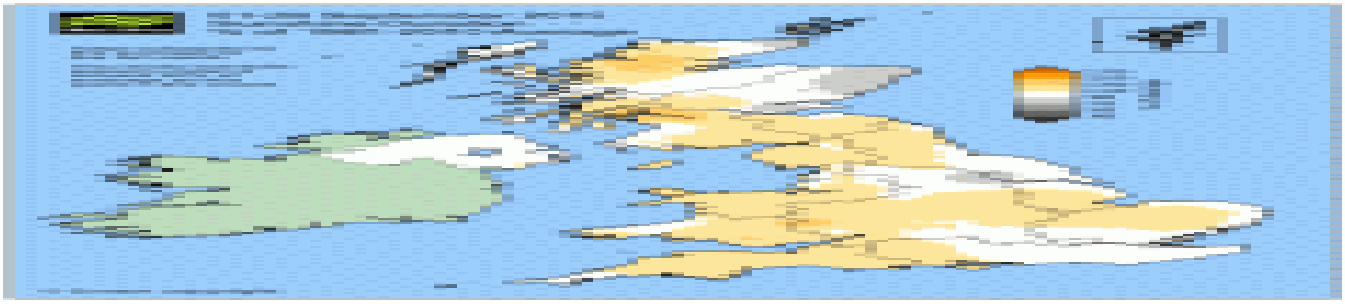
Upslope Cloud



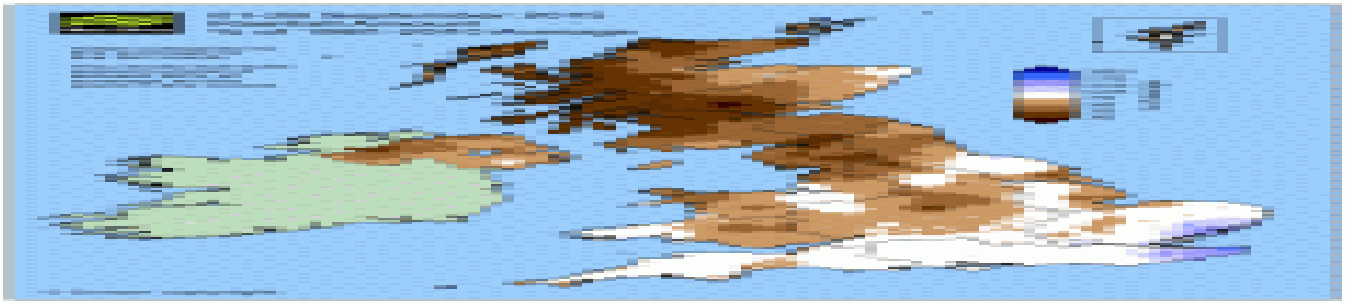
RAF Gibraltar

Lenticular Cloud

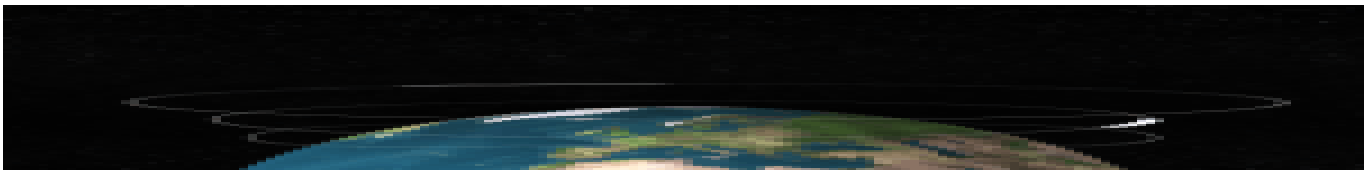
Snow in Ronda

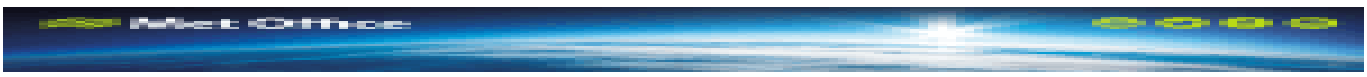


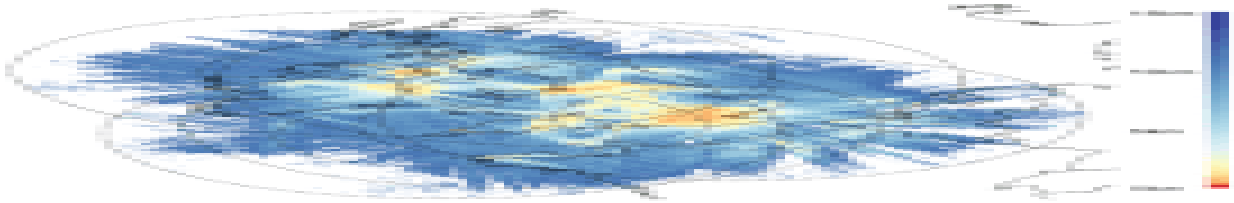
September 2015 sunshine anomaly

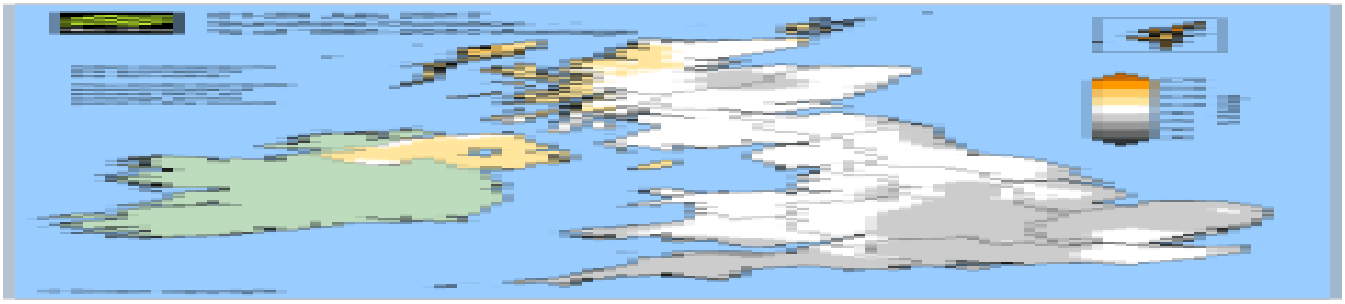


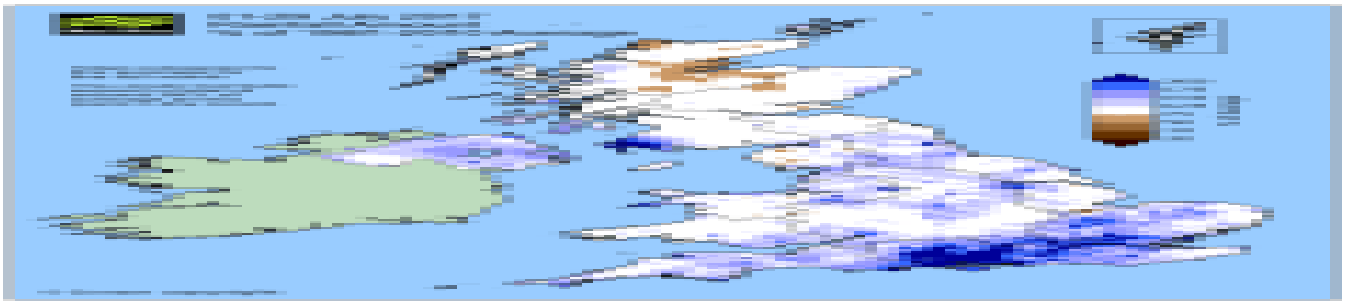
September 2015 rainfall amount

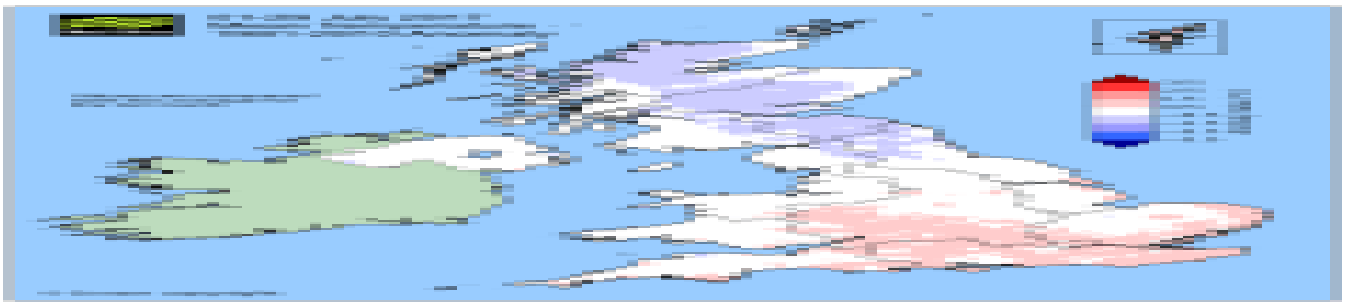


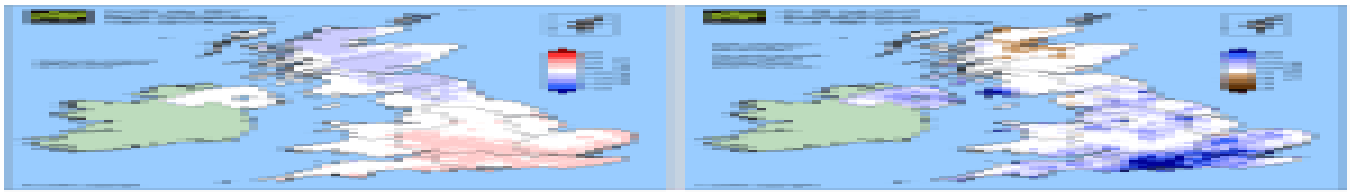


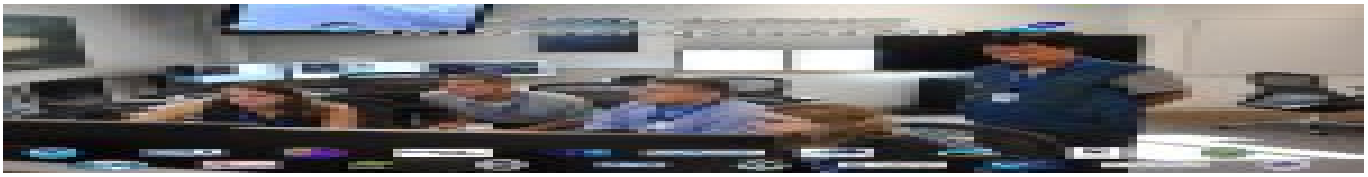


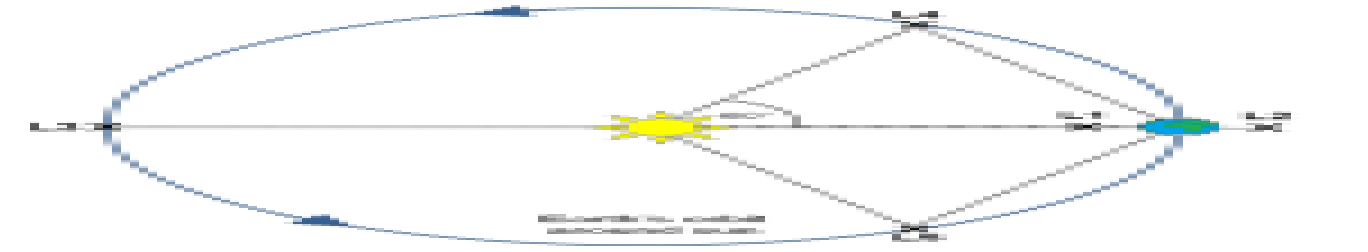


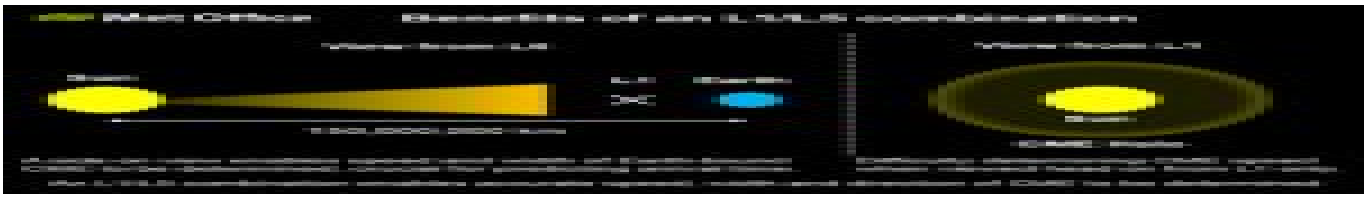


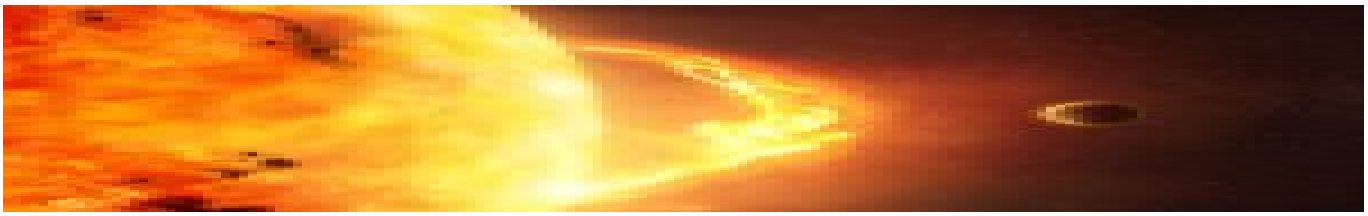


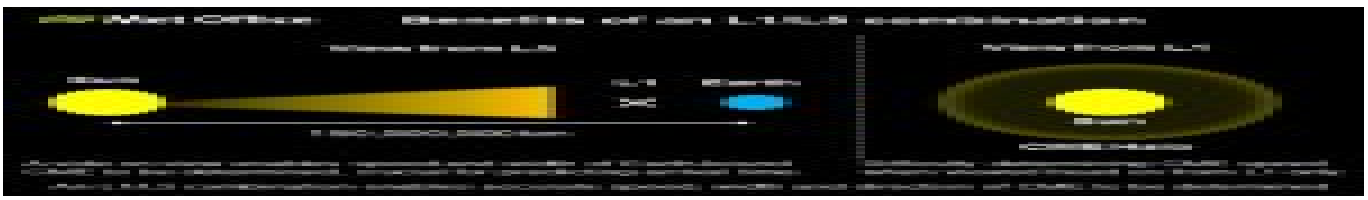


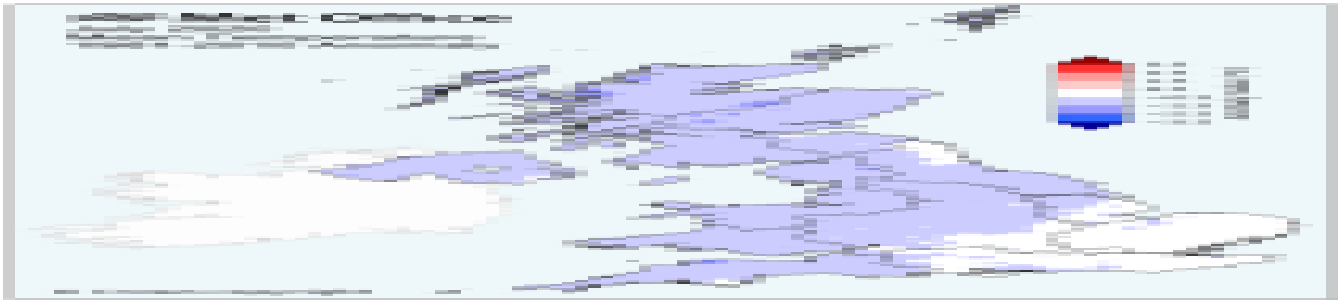


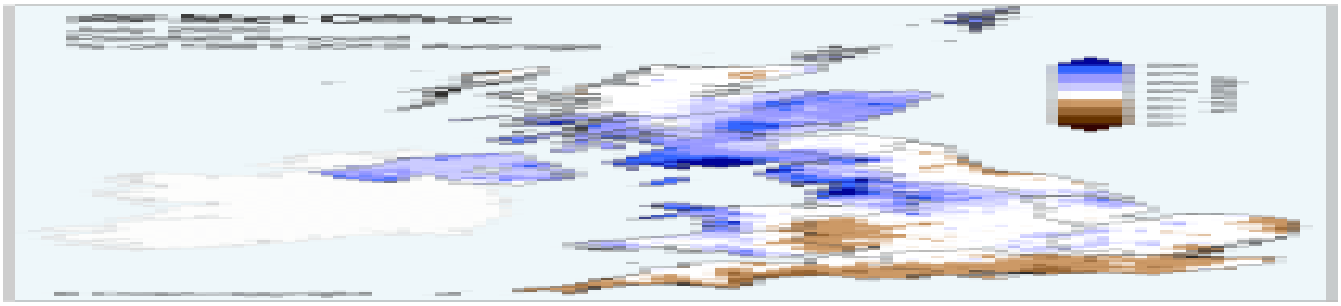


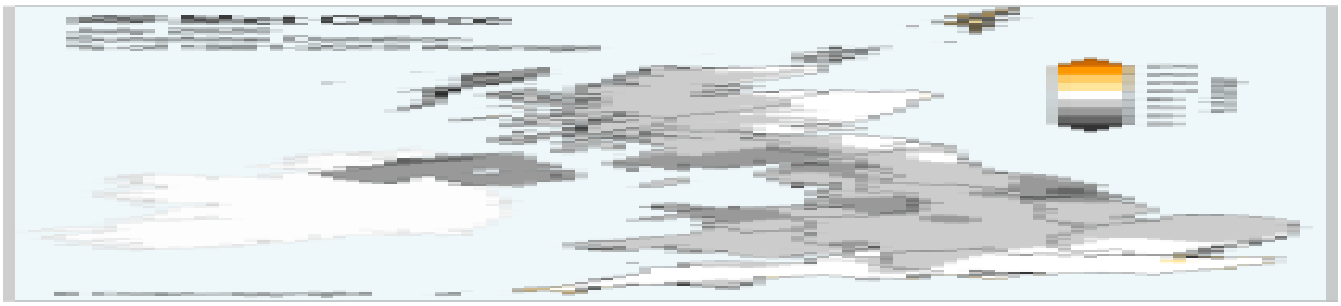


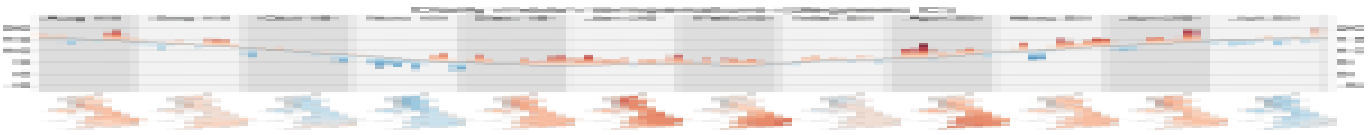


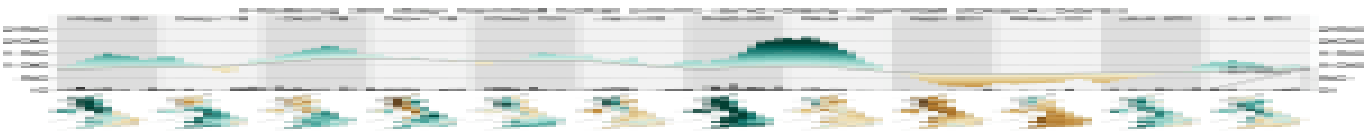


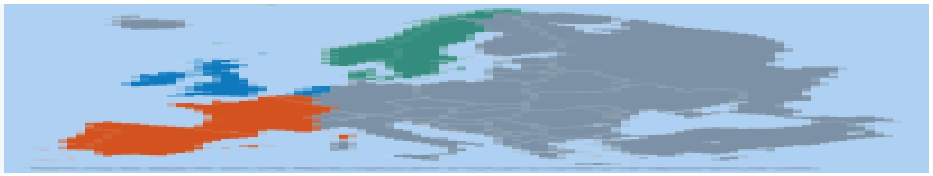


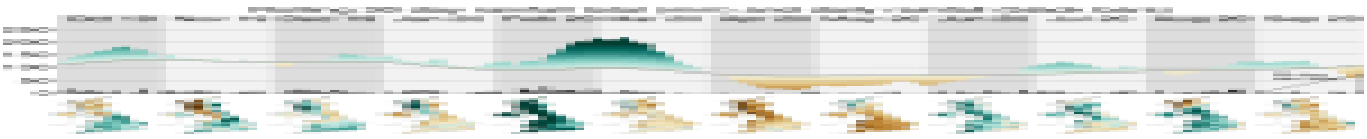


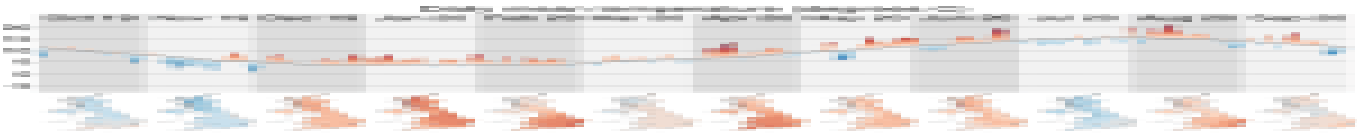


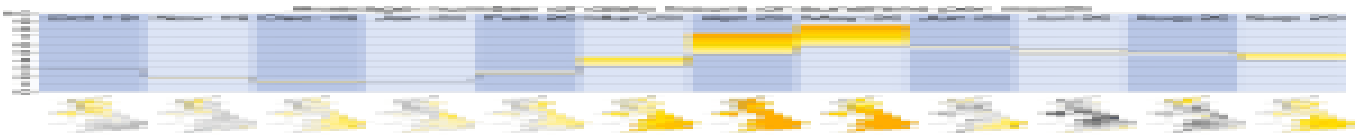


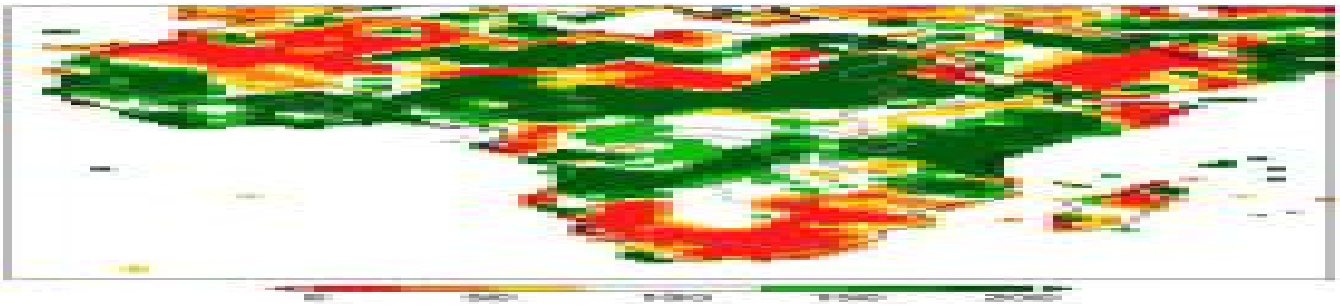


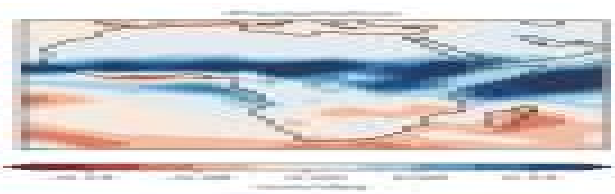


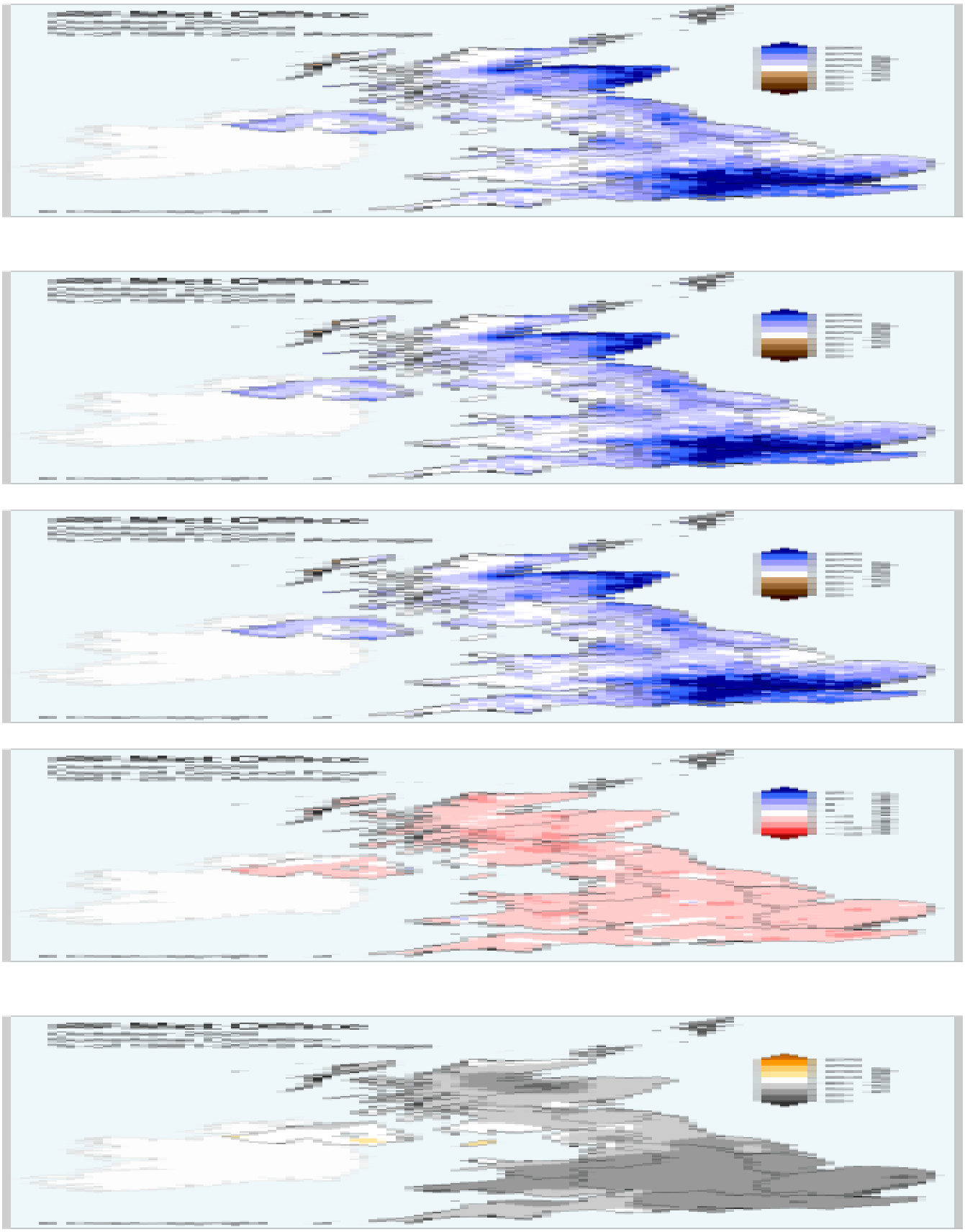


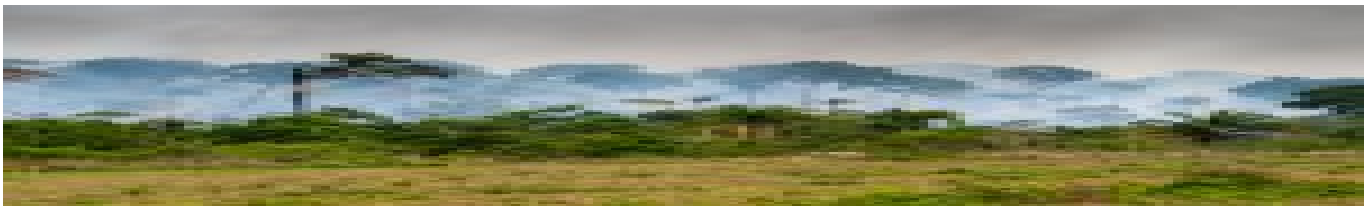


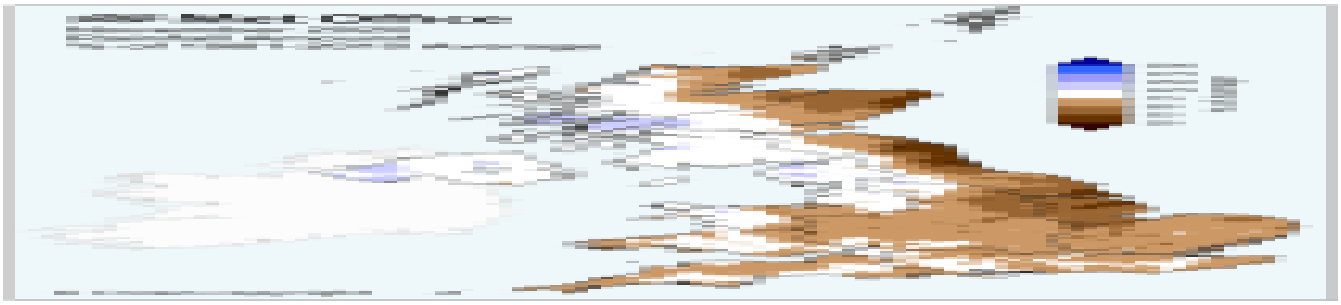


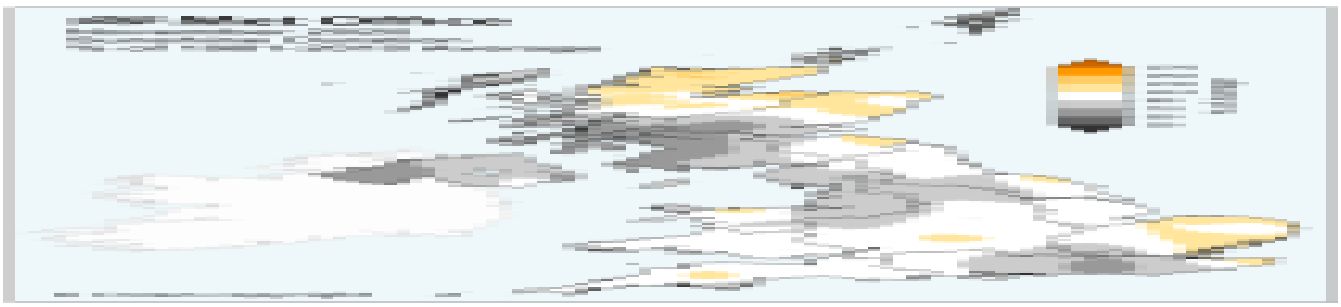


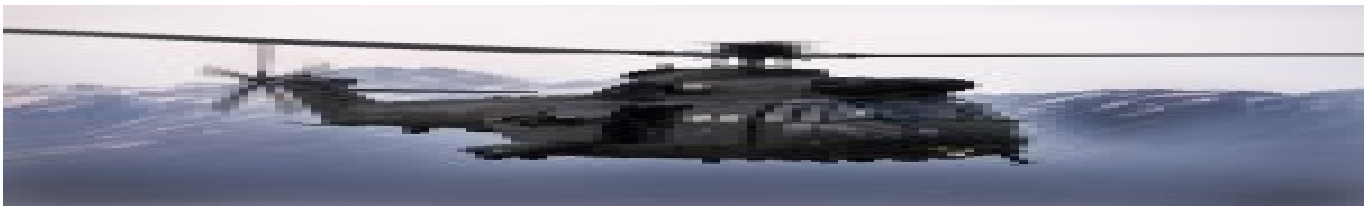




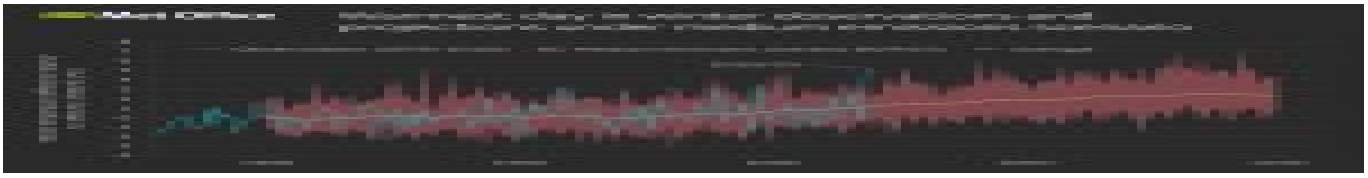


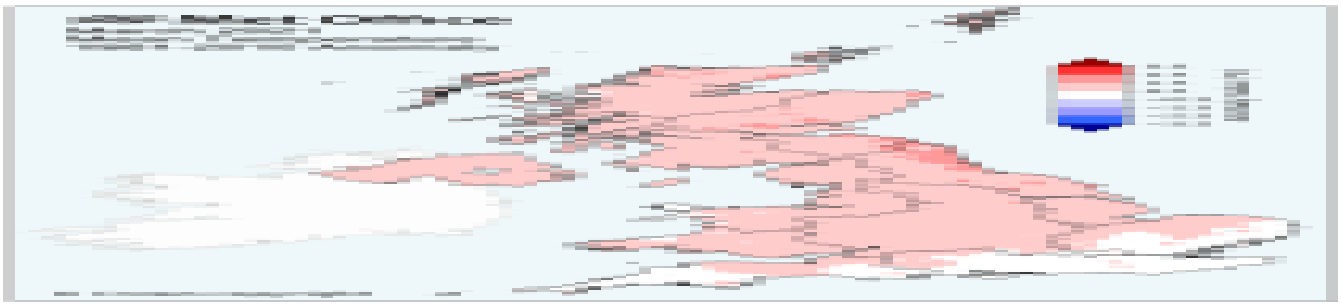


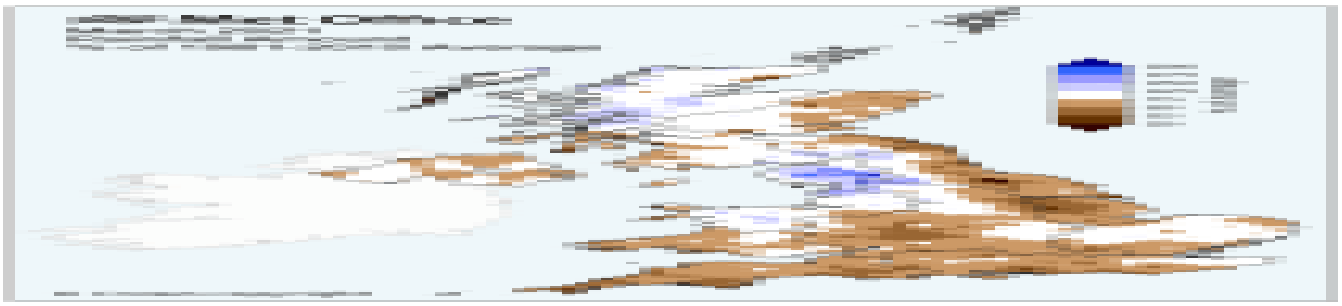


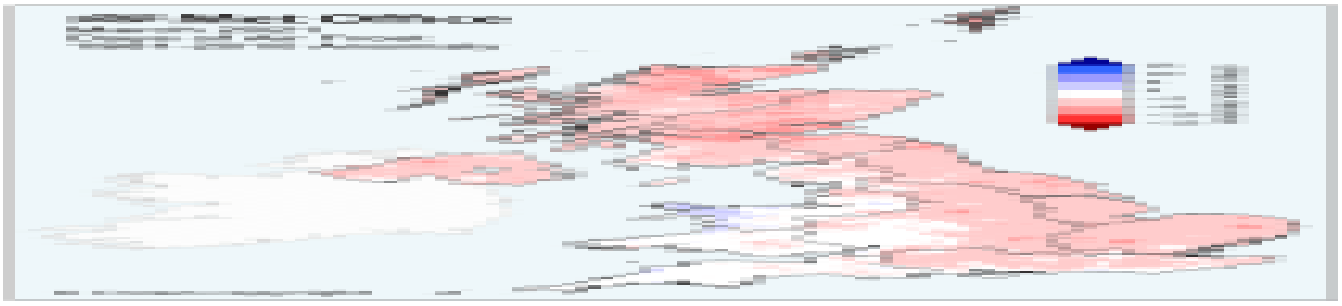


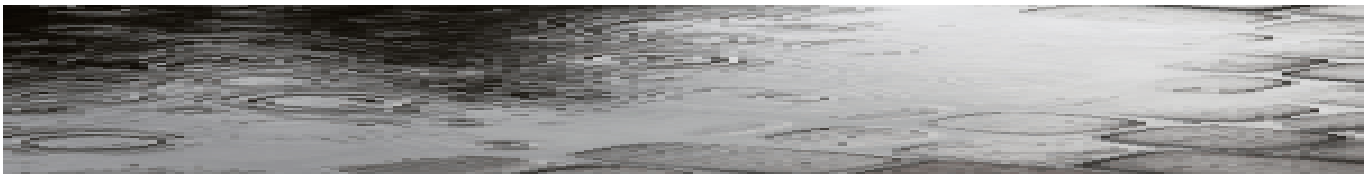
Pictured is a Puma HC.Mk 2 helicopter normally based at RAF Benson in Oxford, currently serving in Kabul, Afghanistan on Op TORAL. The helicopter provides transport and support to coalition personnel based in and around Kabul. The Puma HC.Mk 2 medium support helicopter operates under Joint Helicopter Command (JHC) control. The aircraft is used in a variety of combat roles, including the tactical movement of troops, weapons, ammunition and stores on the battlefield, as well as the extraction of casualties and in response to medical emergencies on the frontline. It is also employed during non-combatant evacuations, and humanitarian and disaster relief operations.

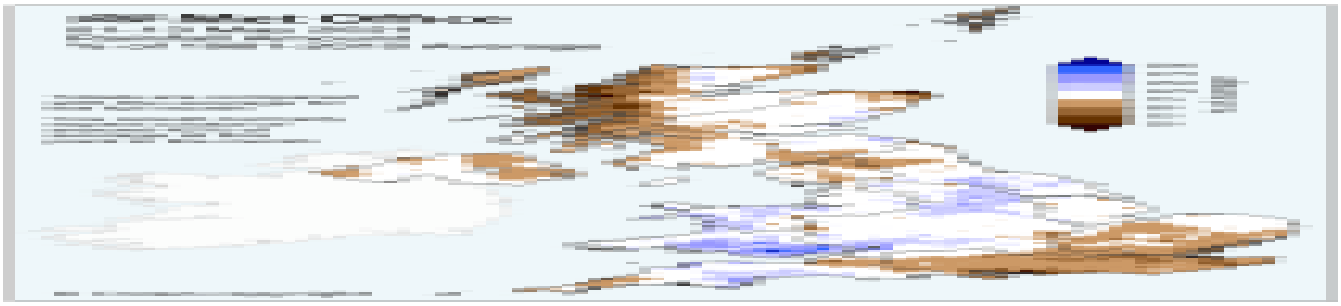


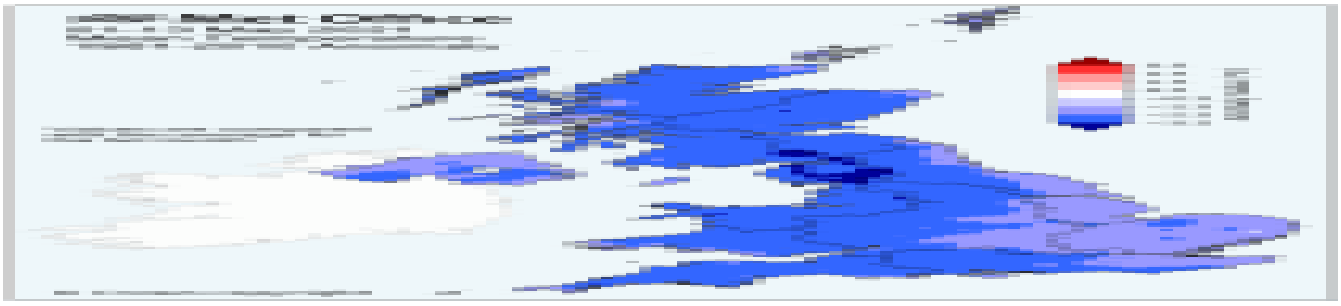












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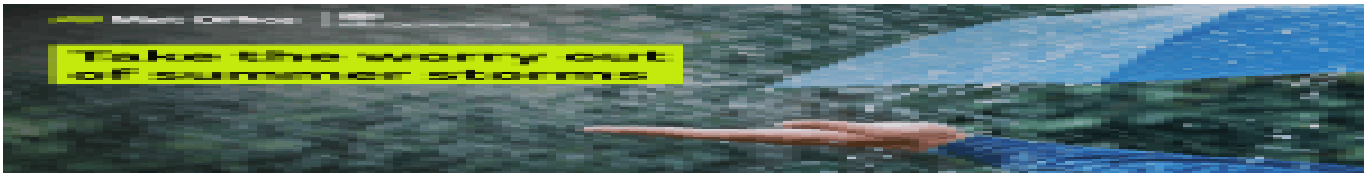
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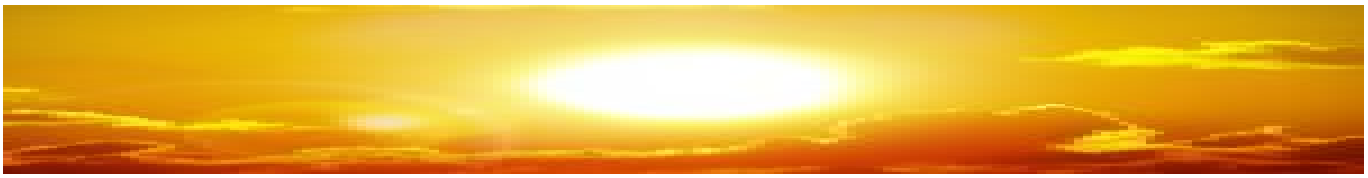

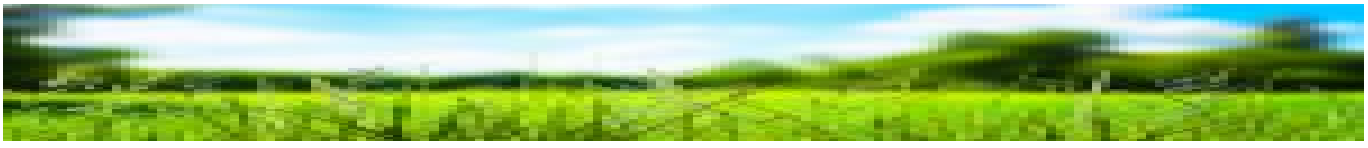

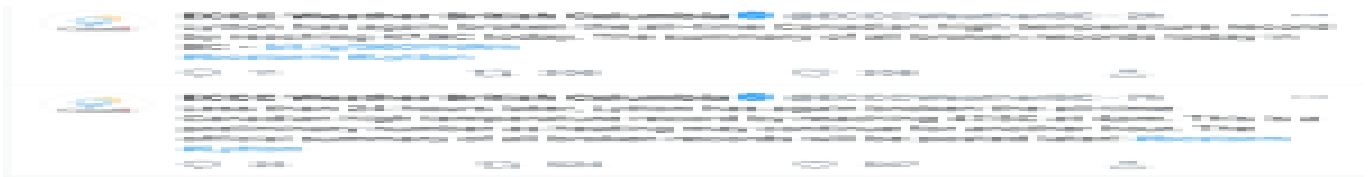

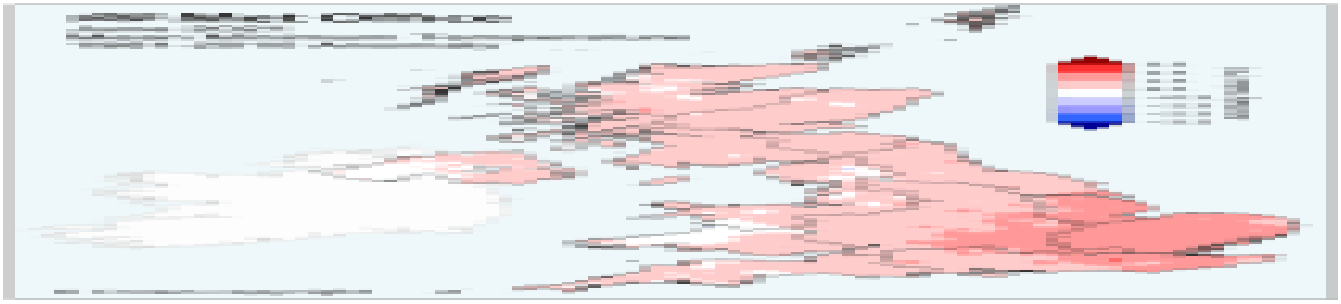

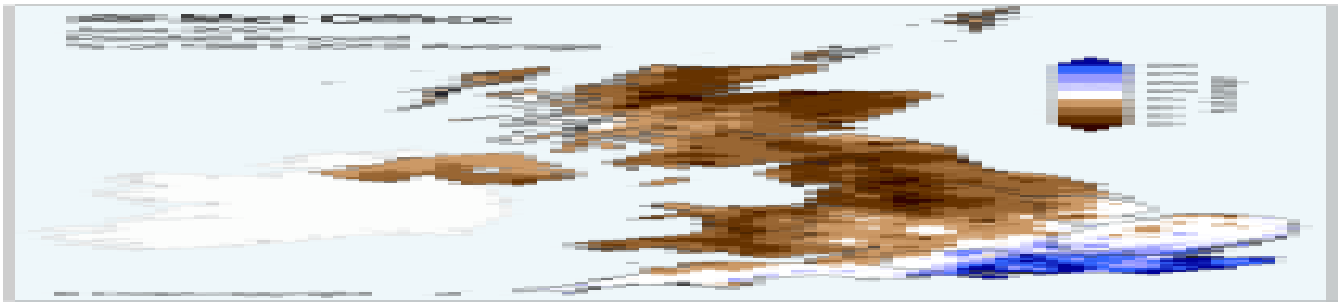

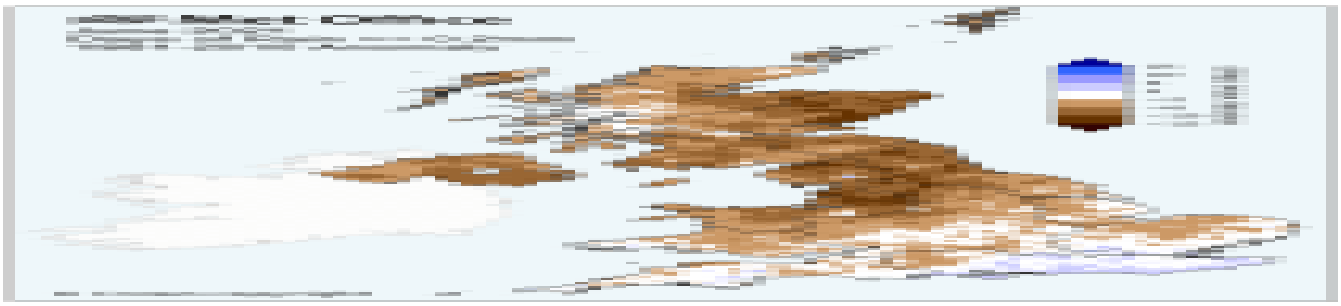

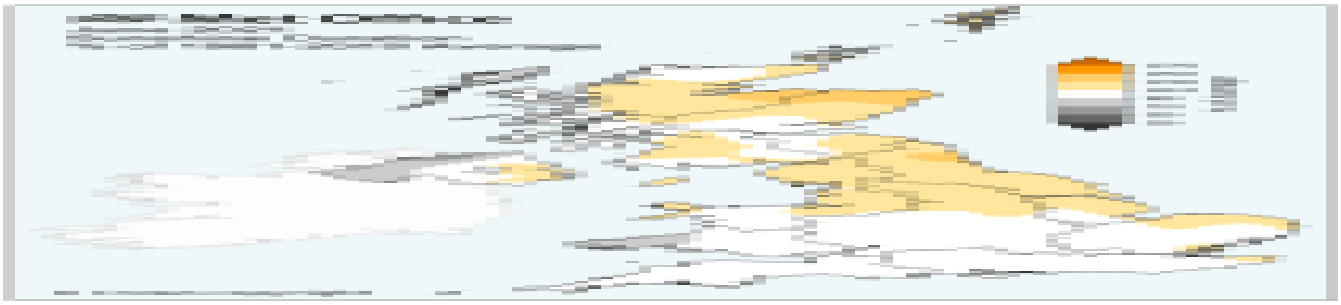

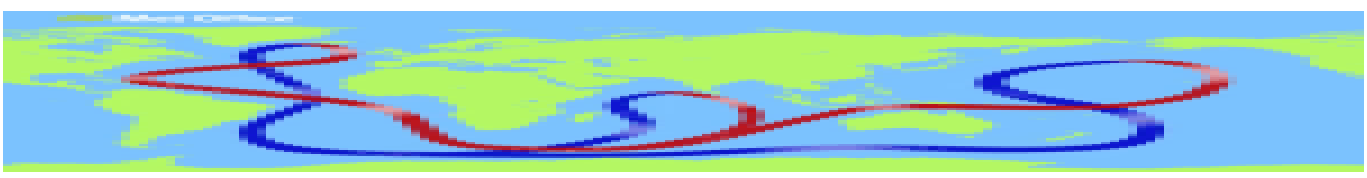

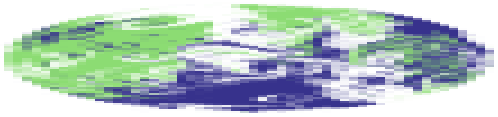

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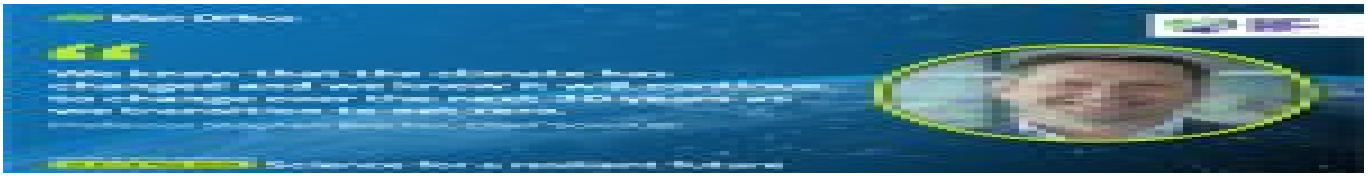

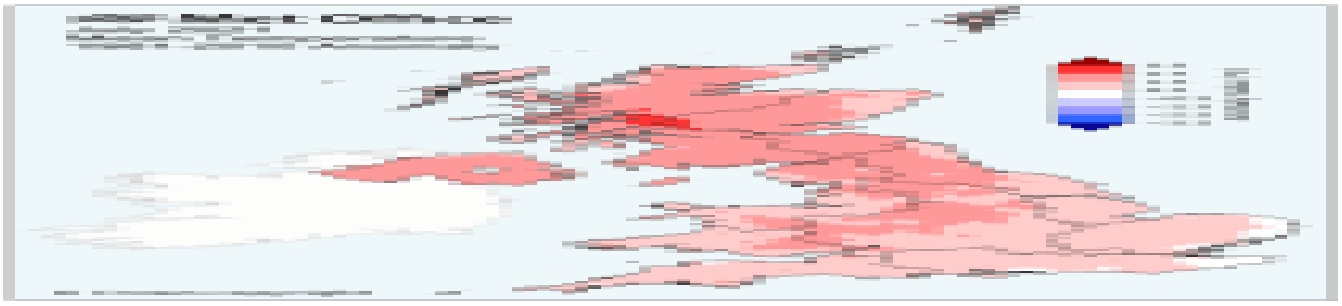

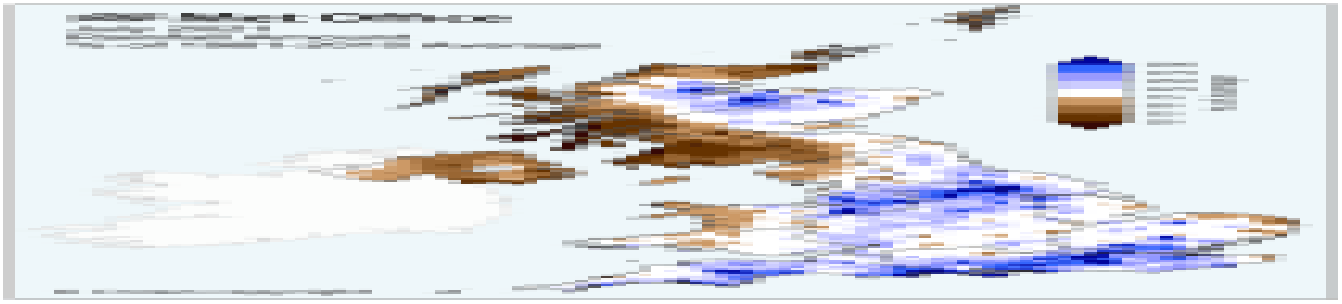

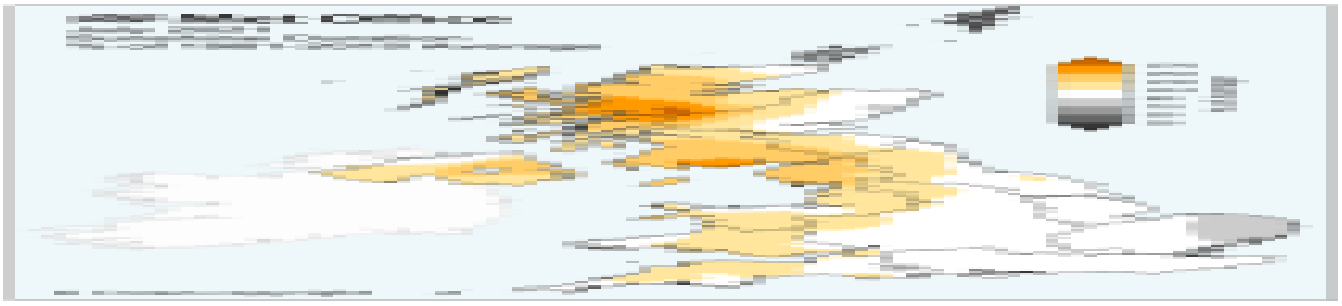

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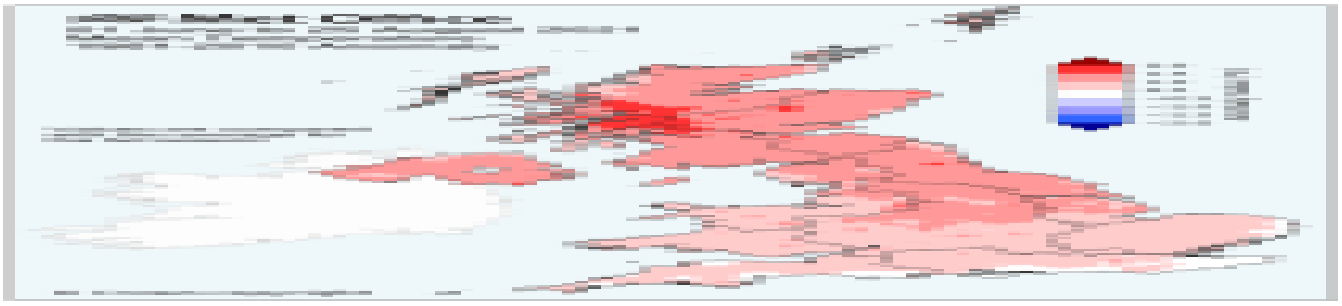
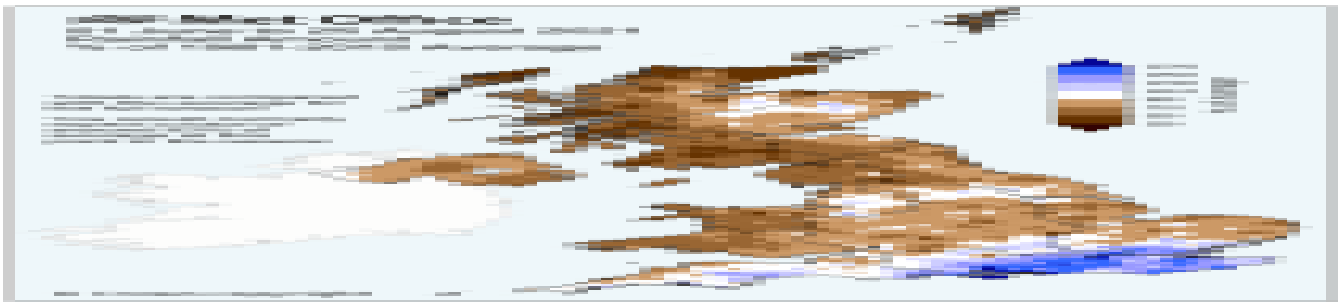
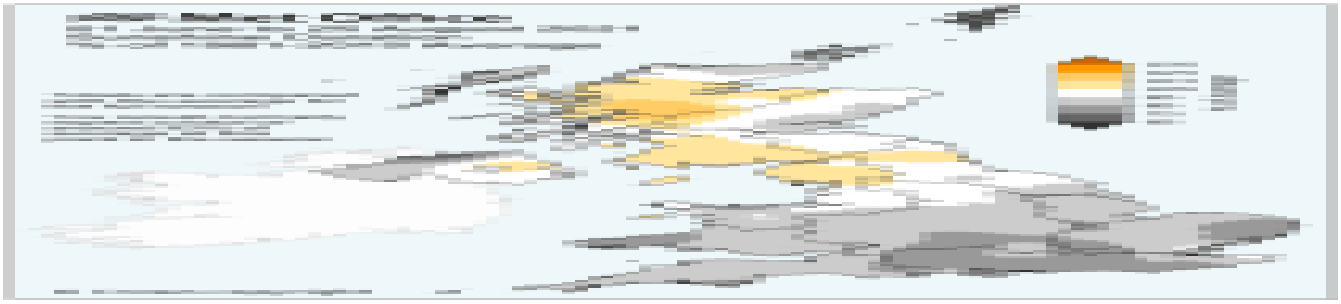
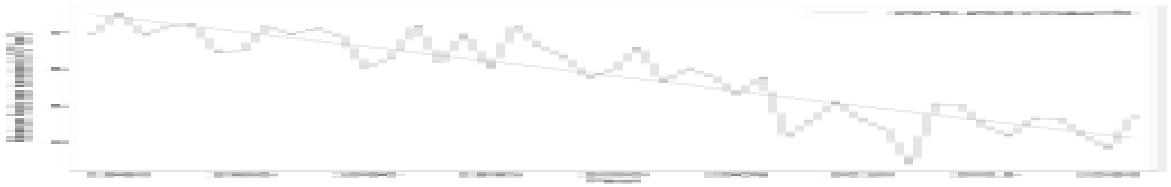
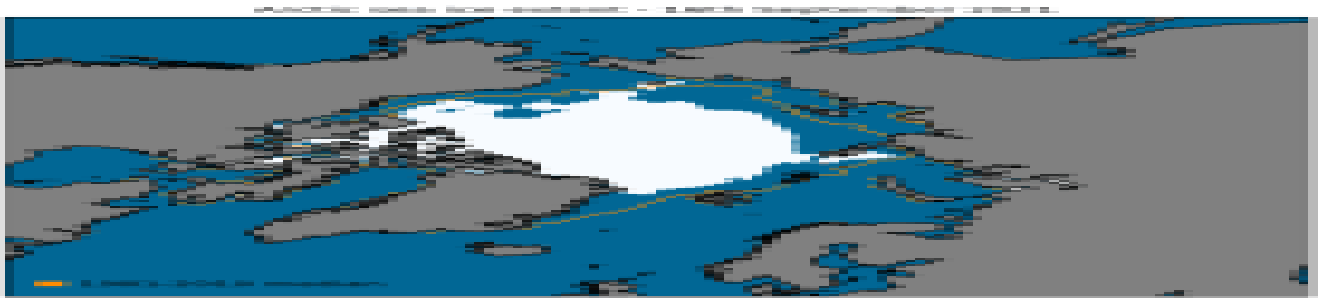
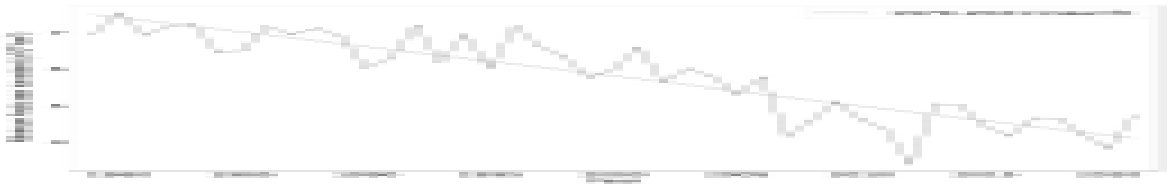


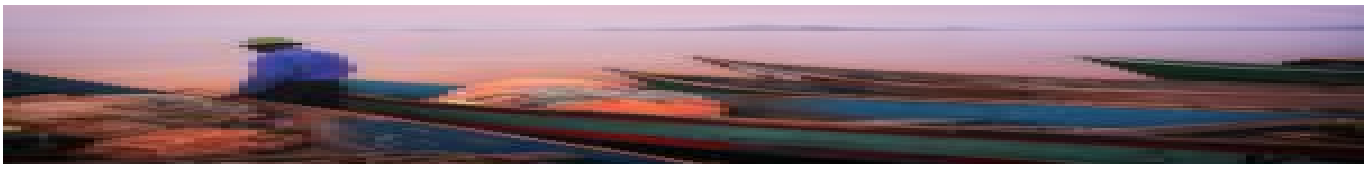


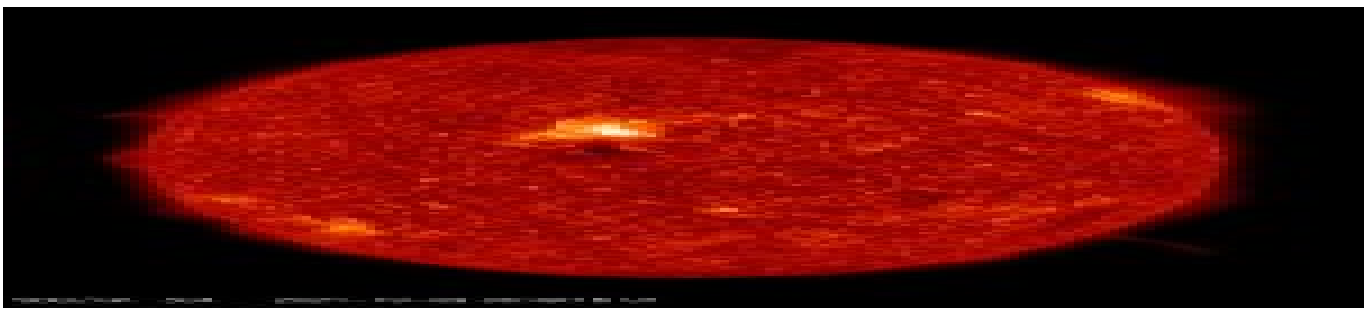


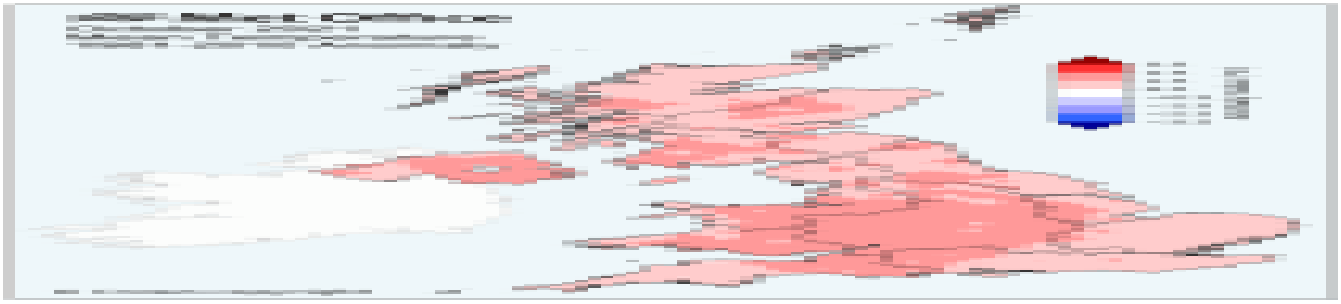


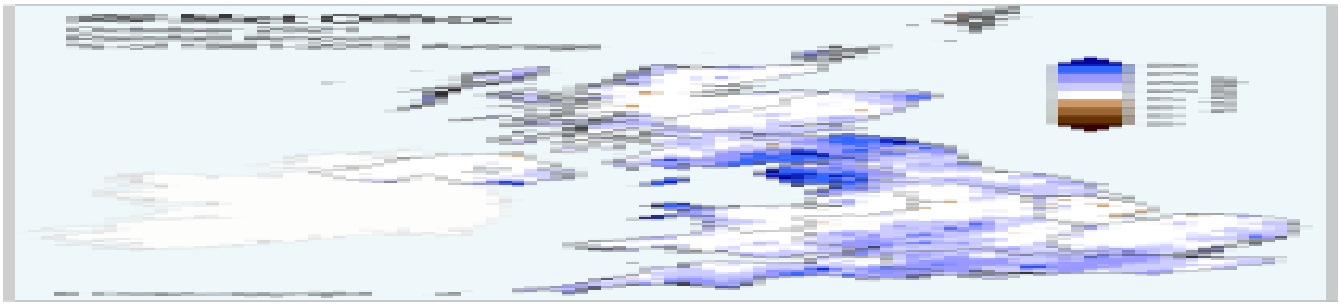


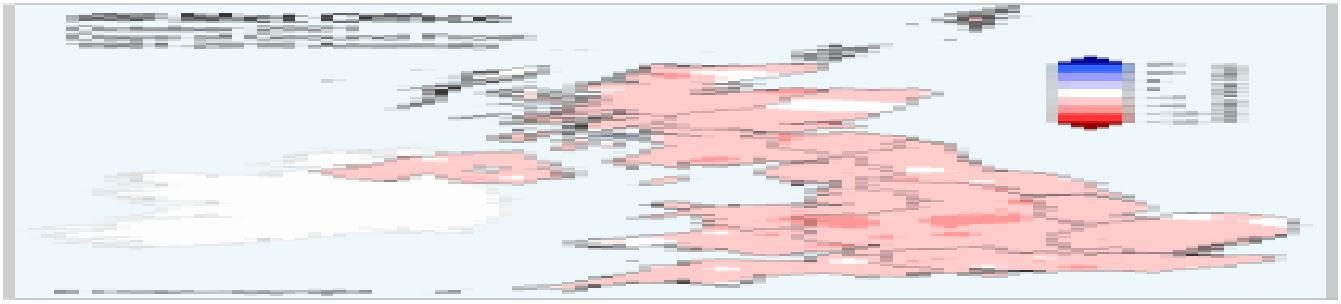


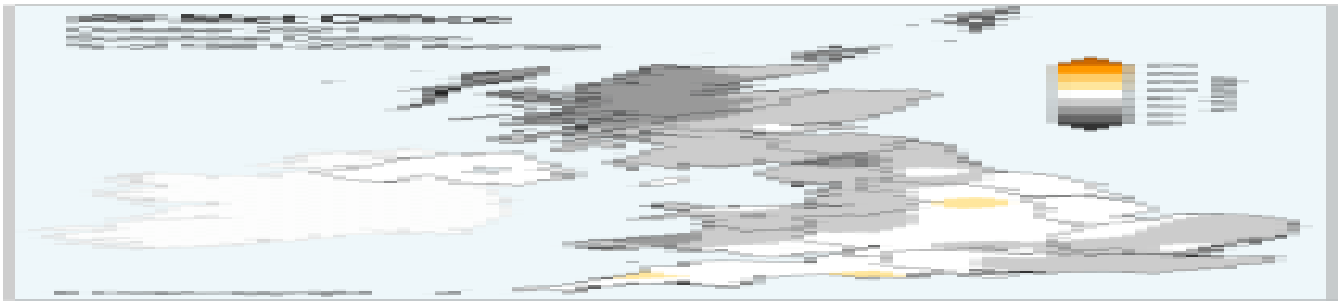


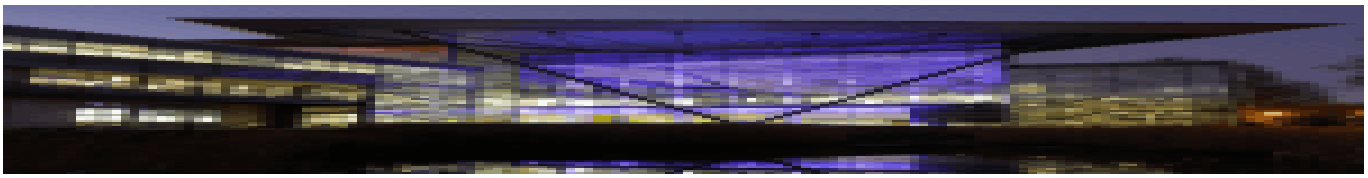


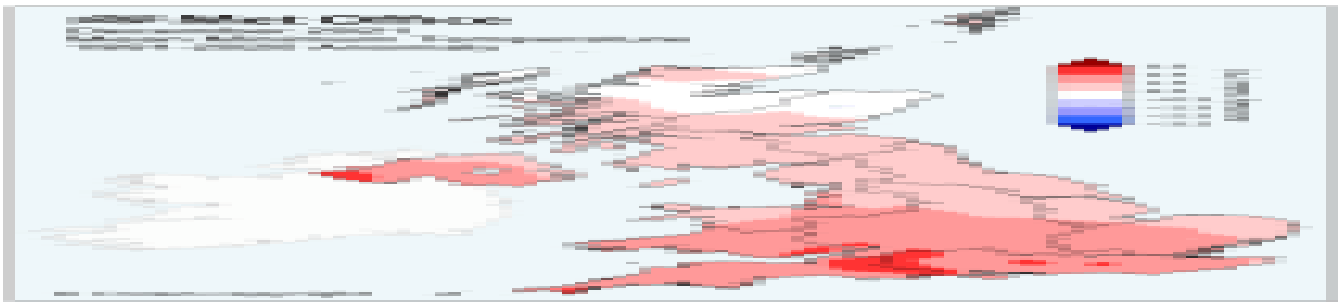


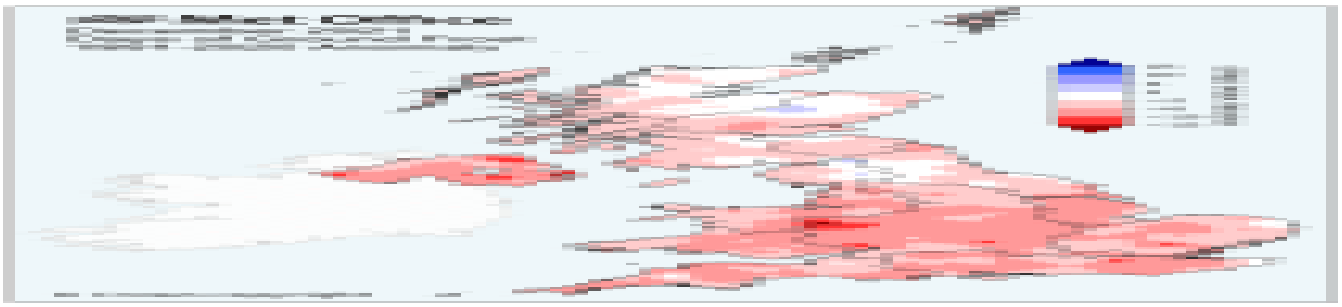


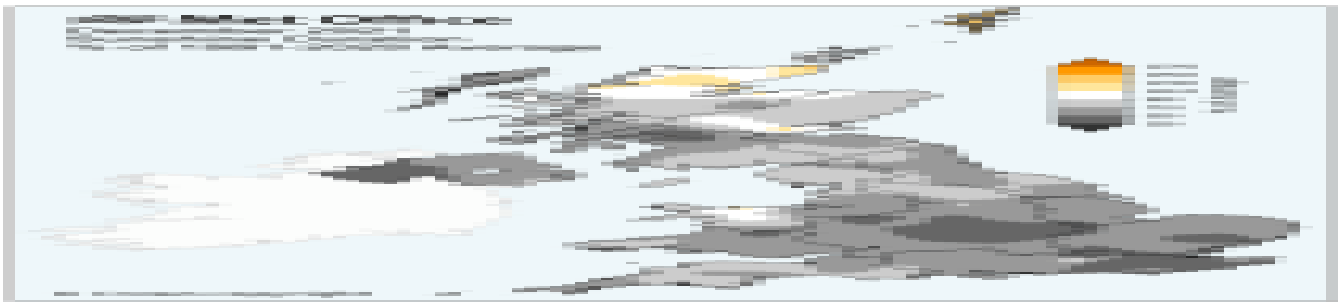


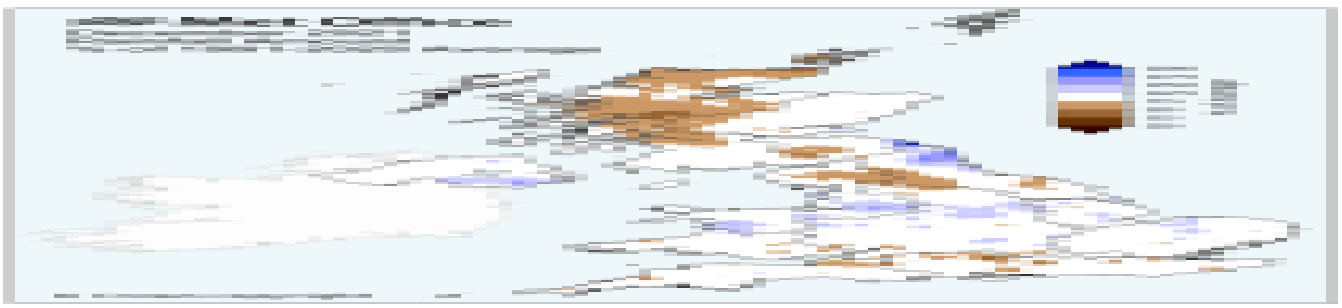


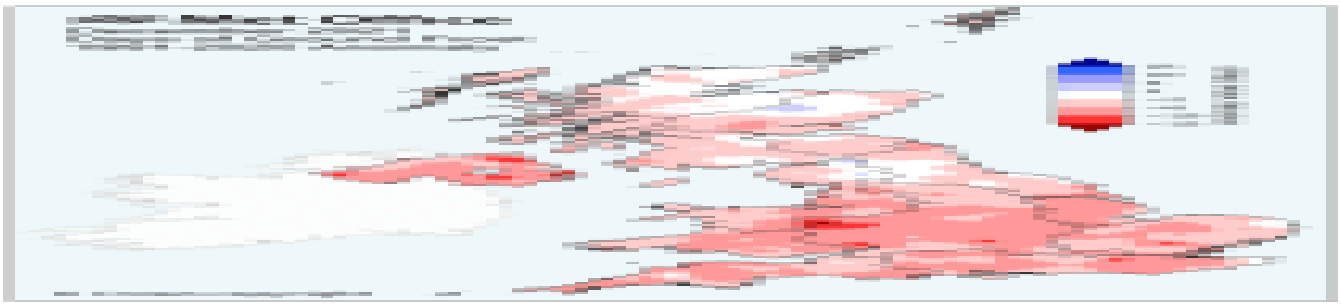


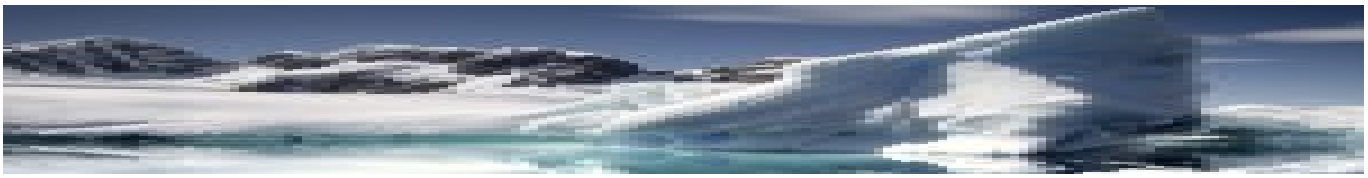




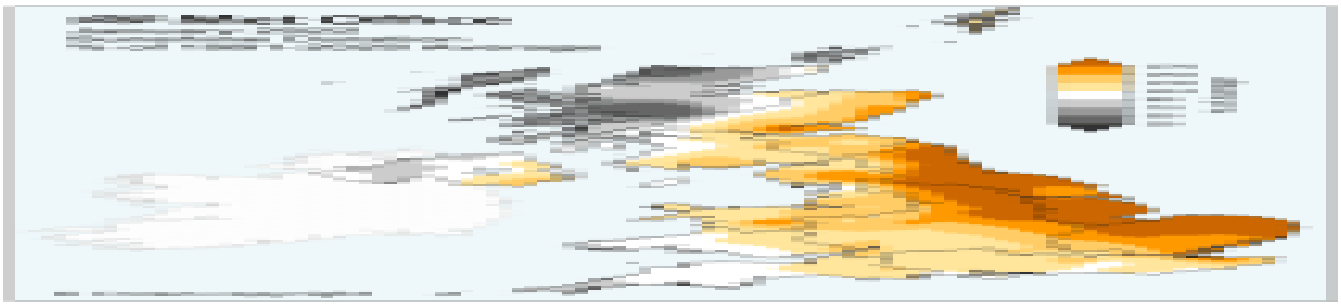


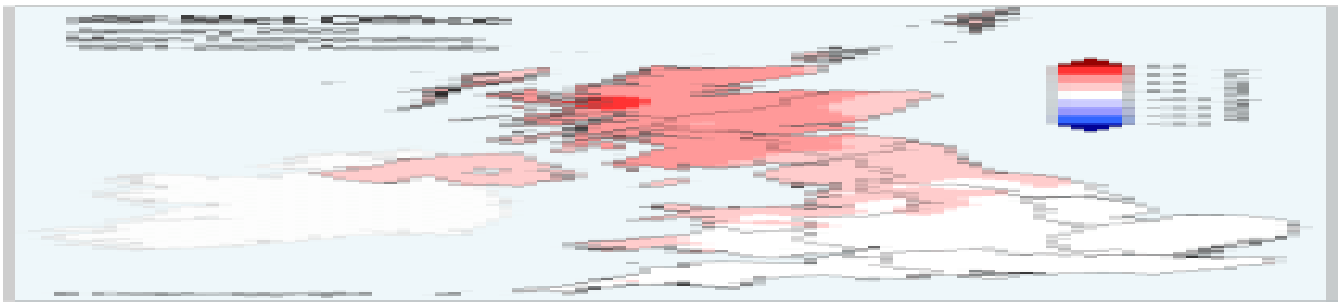


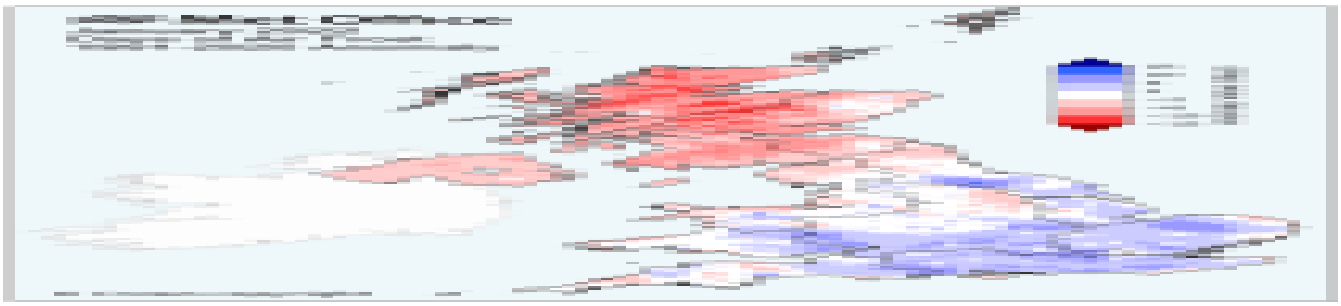


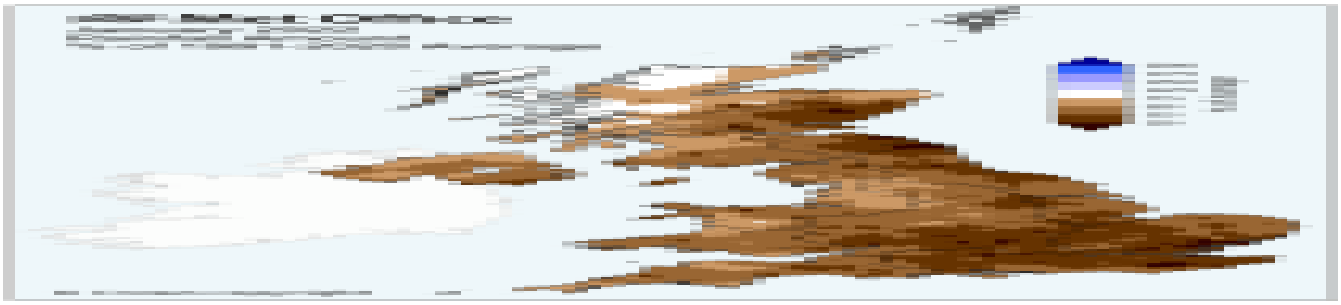


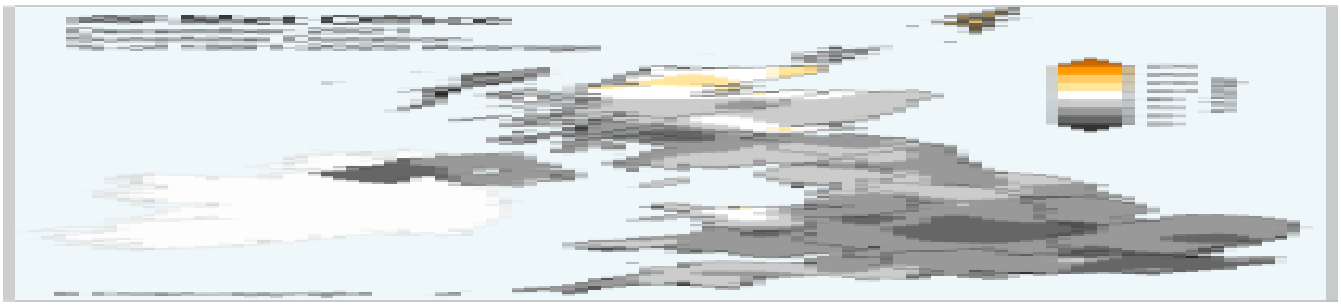
Flood

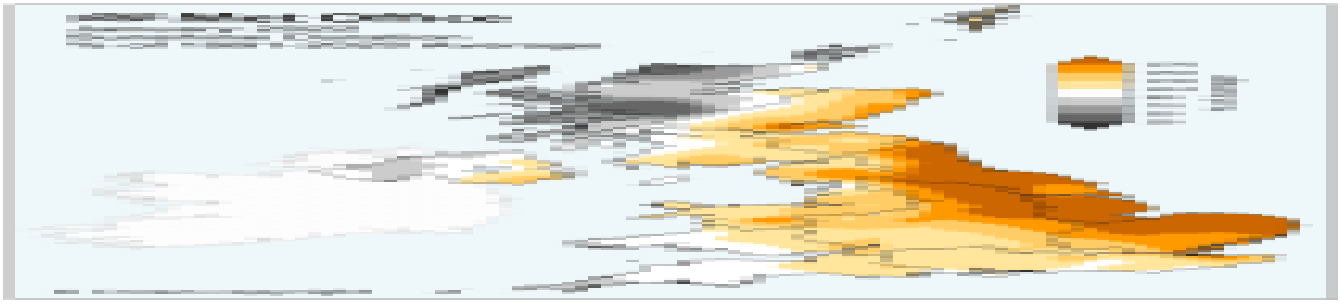


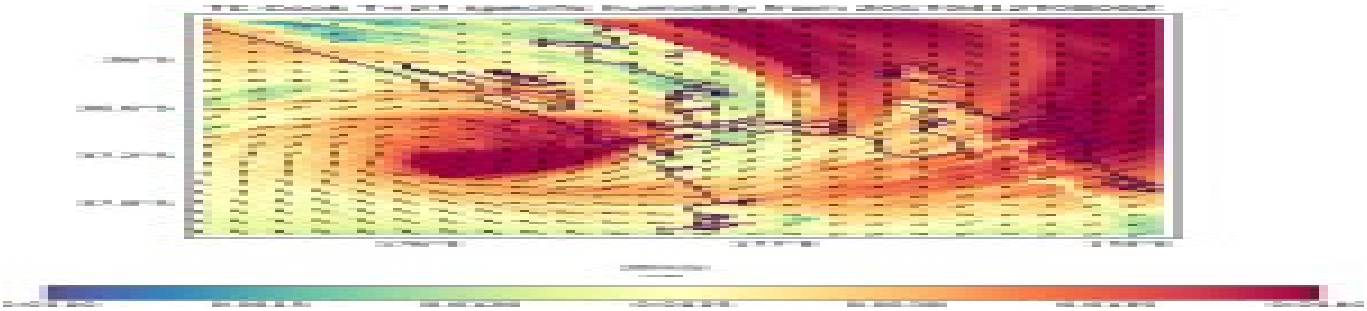








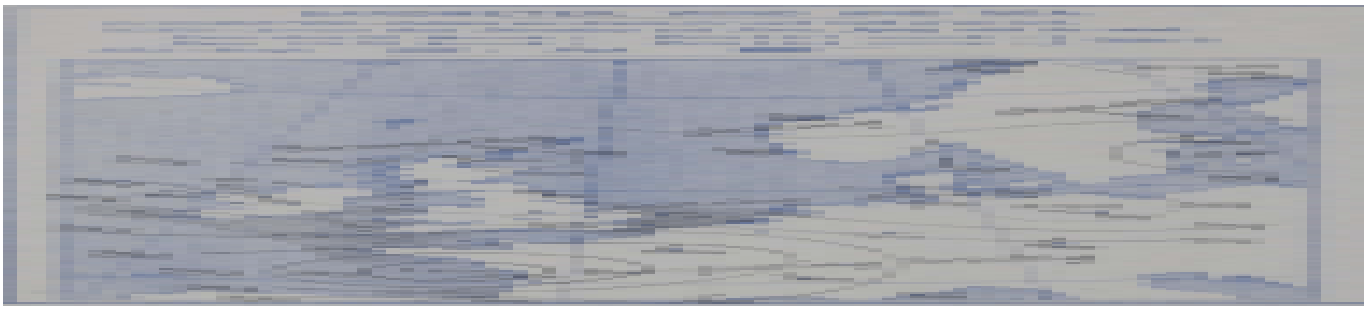


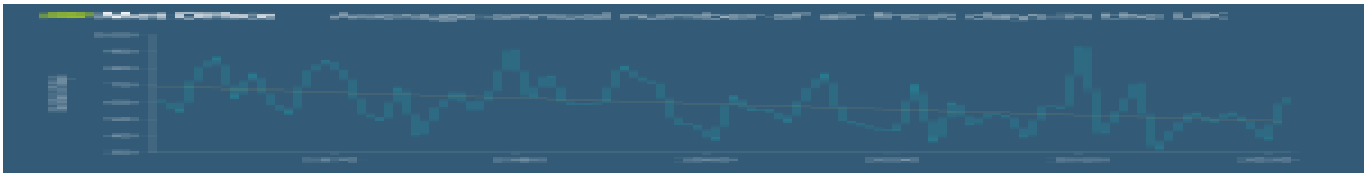


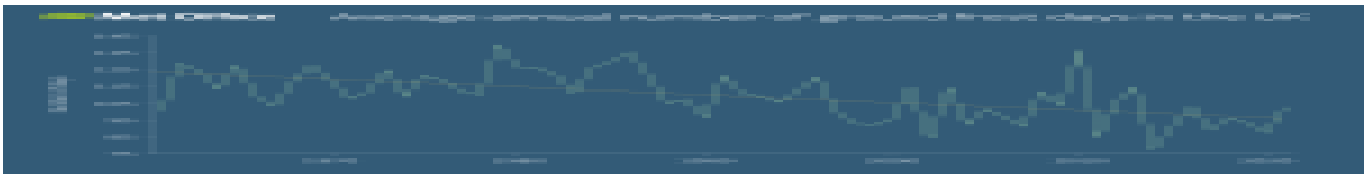
SCIENTISTS 'MOVE' NEW ZEALAND TO MODEL CYCLONE IMPACTS

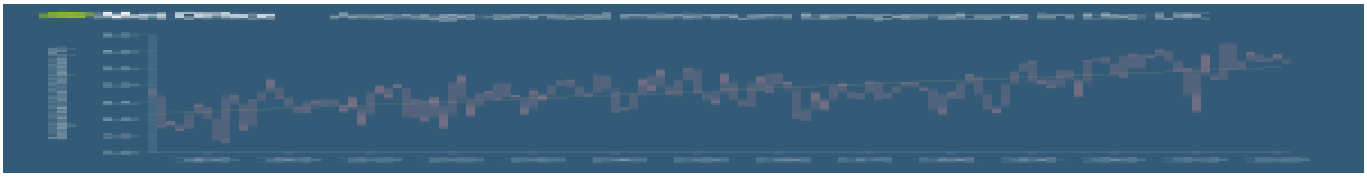
Met Office
Met office explains
New Look Weather Graphics

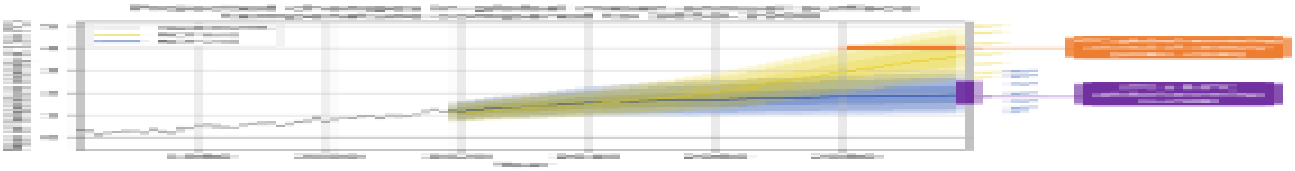
WEATHER CHARTS

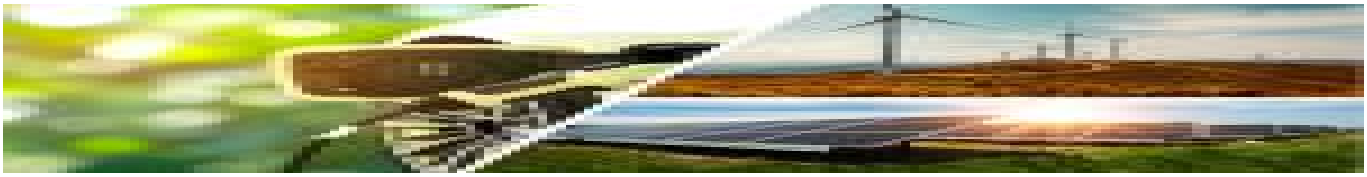


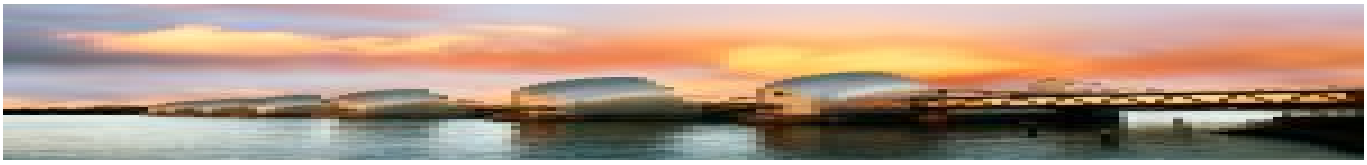






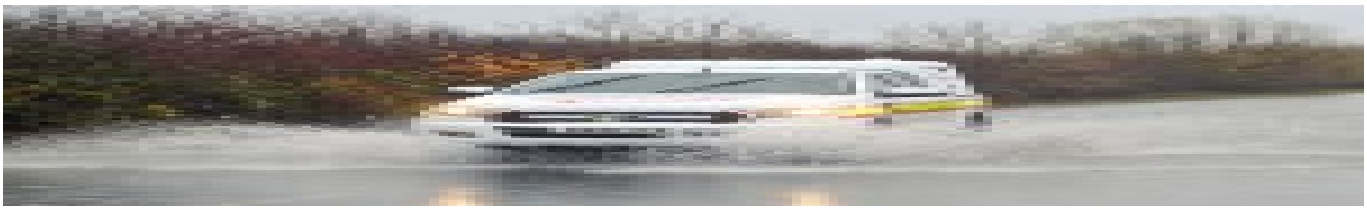




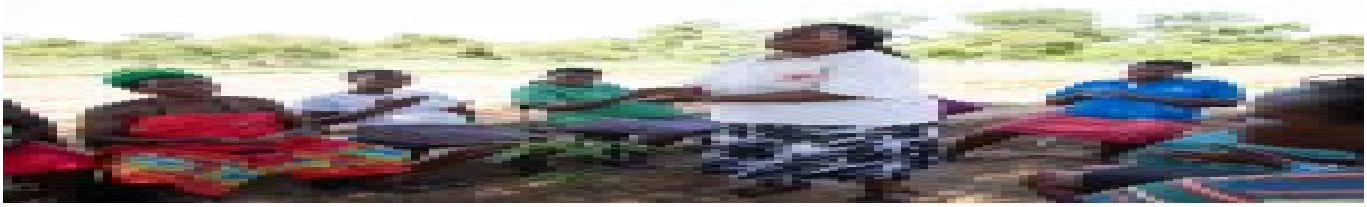


Aerial view of flooding on Henry Ward’s farm in Lincolnshire, December 2019. Credit: Dominic Swire / NFU

Dry, Parched ground with deep cracks in a ripe wheatfield at sunset



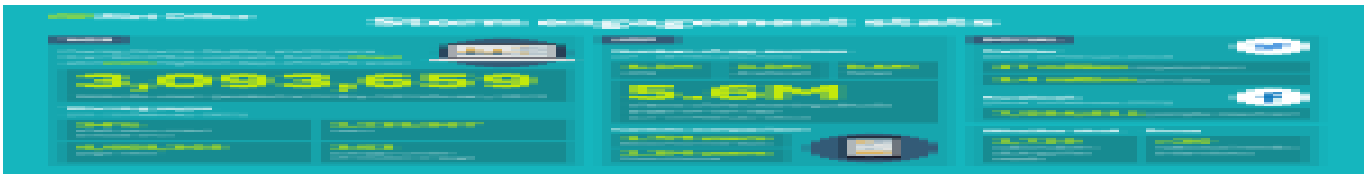
Emergency response volunteer Kenny drives through floodwater in a British Red Cross vehicle to reach the community of Fishlake, Doncaster. British Red Cross volunteers were out in force providing support to many communities after widespread flooding swept across northern England. Thousands of people were forced from their homes across Yorkshire and the East Midlands due to flooding in November 2019.

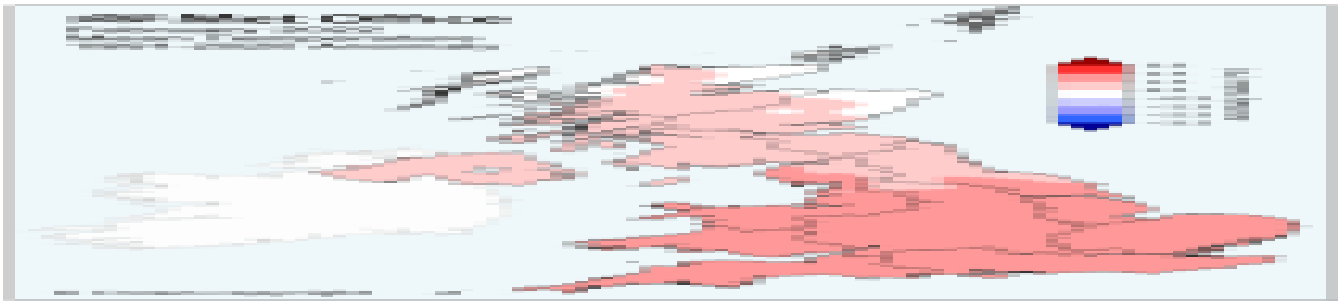


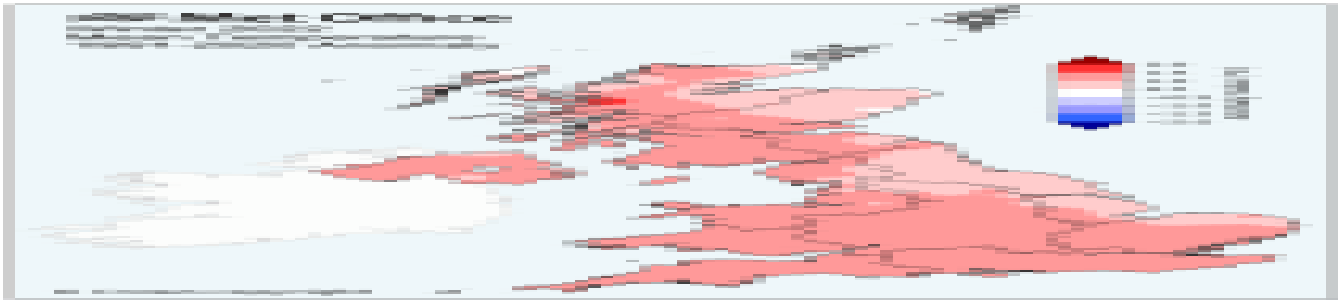
Red Cross volunteer Musa Sibanda with expectant mothers under the tree in the Red Cross nutrition garden at Neshuro District Hospital. Neshuro village, Mwenezi district, Zimbabwe. Musa says: “I started volunteering with the Zimbabwe Red Cross in 1995, so I’ve been volunteering for 24 years now. I decided to join because there are many challenges affecting our communities, such as poverty, climate change and HIV. Life here can be very hard for people here and I felt I was able to help.” Musa continues: “As the team leader for Mwenezi district, my role involves lots of different things including coordinating, inspiring and supporting the other 520 volunteers across the district. “We train people from across the community in first aid, on climate-smart farming techniques, and providing counselling and support for people living with HIV and AIDS.” Musa says: “It can be very difficult for people to survive here, most families rely on the rains to grow food to eat. Climate change is causing a lot of problems. Rains are scare, they come once in a blue moon. We used to plough in early September, and rain used to come from October to December. In January, crops were almost ready to be harvested. Now in early January, you can see that nothing is growing in the fields. We teach climate- smart farming to subsistence farmers which supports them to grow food during drought. This help them to become less reliant on the rain, which is unpredictable. This means they can sell produce to pay for school fees for their children, they can buy medicine for family members who get sick, or buy chickens or household items they might need. It empowers people in the long term, I’ve seen that people are really benefiting. The Red Cross trains 100 lead farmers each year and each farmer in turn trains 10 people in their community. If you receive the training you can make a difference, from visiting people you can see the impact is really clear. It is a long-term solution.” The project is funded with support from players of thePeople’s Postcode Lottery who have donated £750,000 over four years for this and other resilience projects in rural Zimbabwe. Musa adds: “We also teach local people about health and nutrition, including the ‘five-star diet’ so that people are growing and

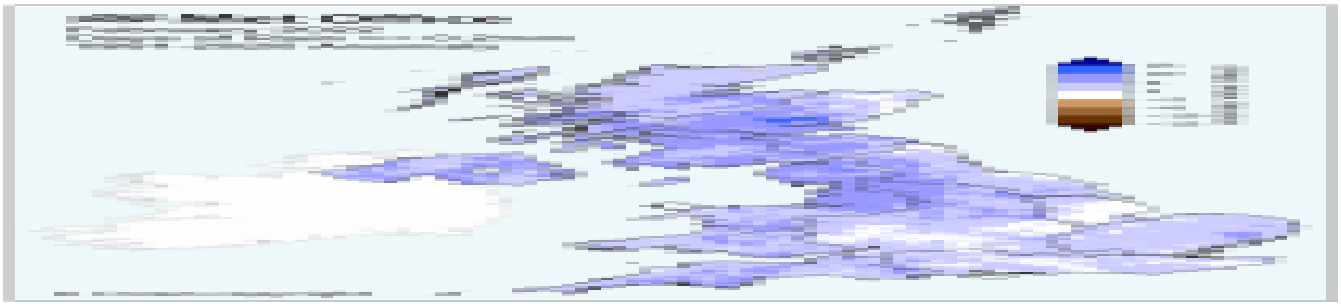
eating the right things. At the nutrition garden at the hospital new and expectant mothers learn these vital skills so they can support themselves and their new-born babies.”

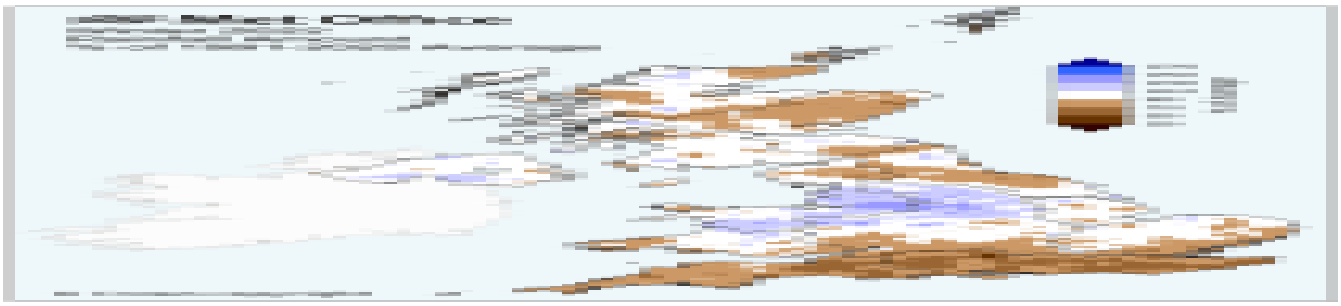
Misti, 30, rides her boat at Kirtonkhola river in Rasulpur, Barishal, Bangladesh, 2020.

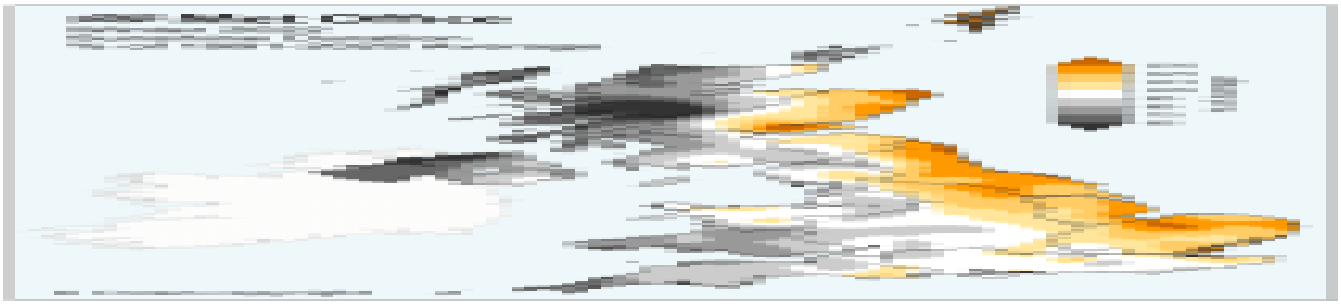


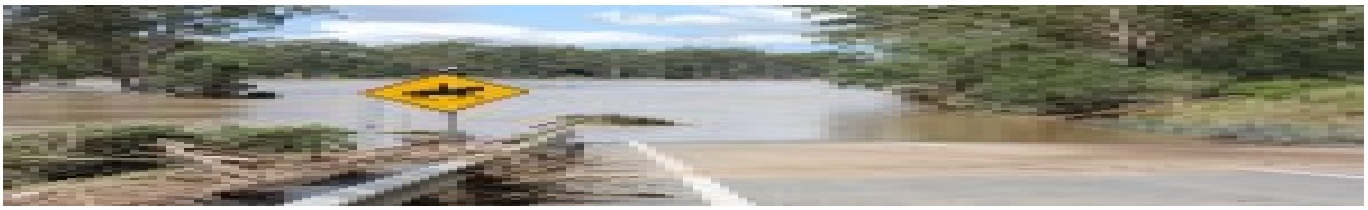


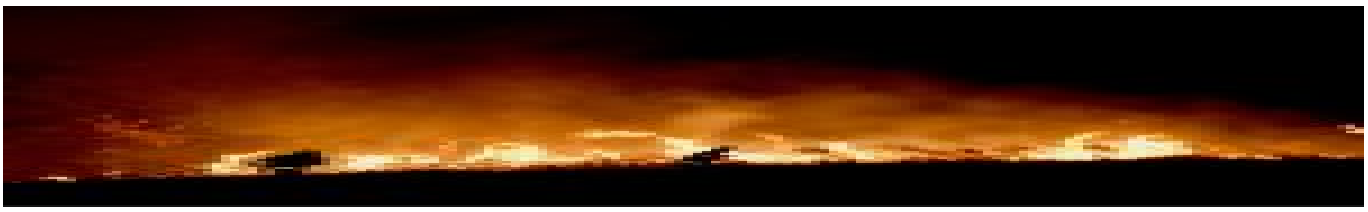


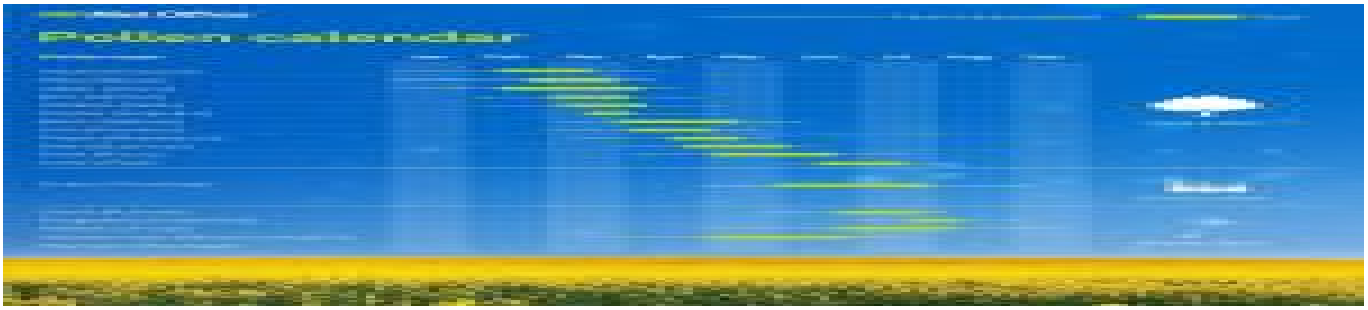


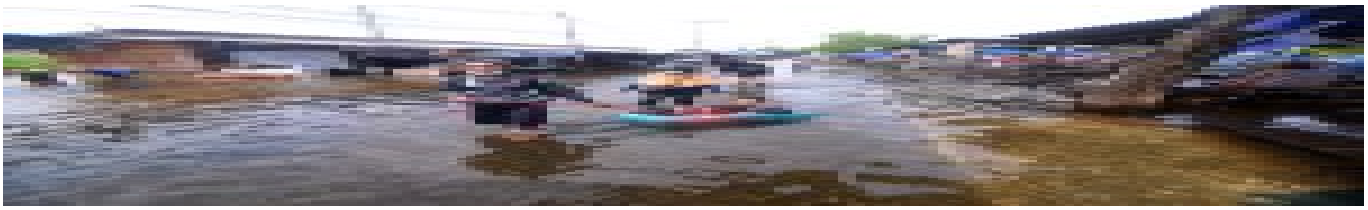


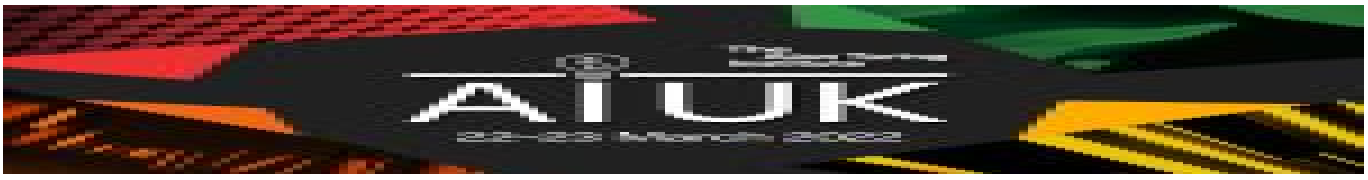







Pollen calendar

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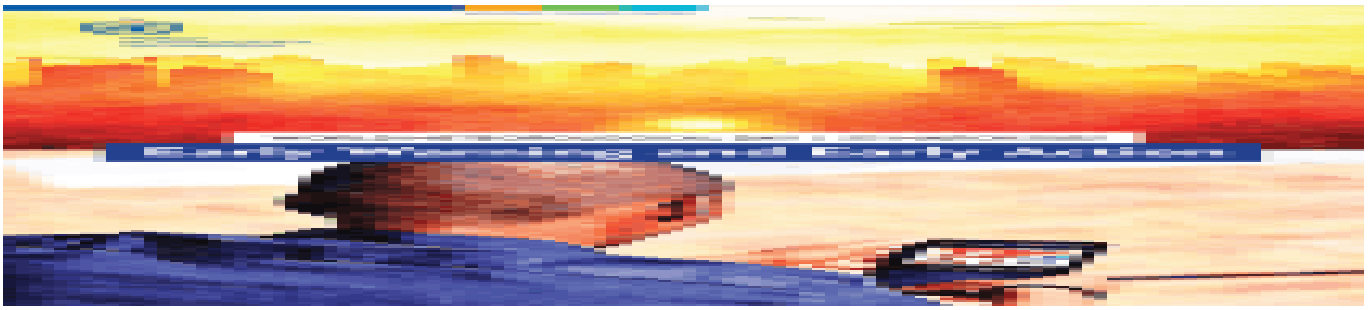
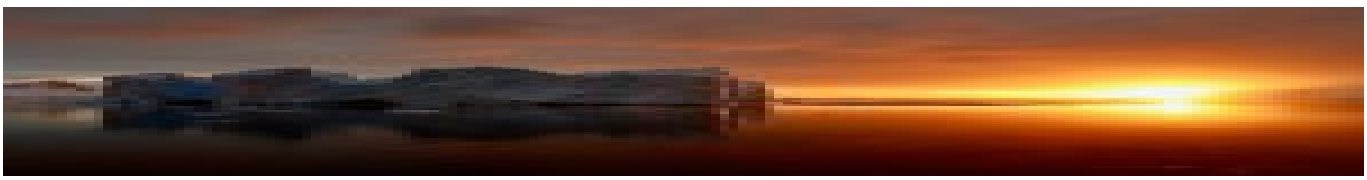
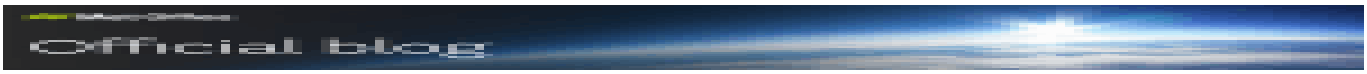
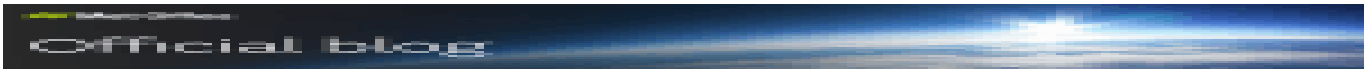


Met Office

Met Office




Official blog


Official blog

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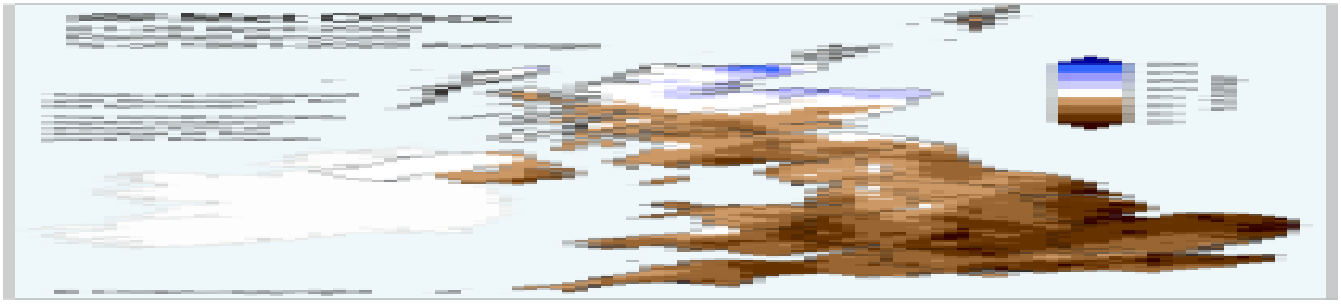

1. **Fall streak hole**. Also known as a hole punch cloud, these clouds sometimes cause people to think the world is ending, especially when wispy vigra clouds are descending from the hole. The exact conditions that cause them to occur are still debated.
2. **Sea mist.** This occurs when mild air moves over the sea, which is cooler. It can be particularly spooky when sea mist comes in during the day and visibility is drastically reduced.
3. **Sunsets.** Although often considered beautiful, some particularly vibrant red sunsets can create a spooky effect.
4. **Dust storms.** Dust and sand storms can be whipped up rapidly by strong winds in arid regions. Dust storms

can look particularly ominous as they approach as they can be up to 40 metres high.

5. **Whistling wind**. Windy conditions can be scary when they blow through objects causing a whistling sound.
6. **Brocken spectre.** This effect is produced when an observer stands above the upper surface of a cloud – on a mountain or high ground – with the sun behind them. When they view their shadow the light is reflected back in such a way that a spooky circular ‘glory’ appears around the point directly opposite the sun.
7. **Roll clouds.** These ominous looking clouds are a type of arcus cloud usually associated with a thunderstorm or a cold front. As these rare clouds often appear to be ‘rolling’ they often cause fear that severe weather is on the way.
8. **Thunder and lightning.** One of the most common forms of ‘scary weather’, thousands of thunderstorms are taking place at any one time across the globe. The lightning you see during a thunderstorm is a large electrical spark caused by electrons moving from one place to another, while the rumble of thunder is caused by the noise of intense heating and expansion of the air along the path of the lightning.
9. **Clouds over a full moon**. This spooky effect occurs when clouds partially cover a full moon.
10. **Fog.** Fog forms when relatively moist and mild air close to the ground cools quickly, causing the moisture in the air to condense (at which point it becomes visible to the human eye). This normally happens in autumn and winter under clear skies, which allows heat from the ground to escape quickly to cause rapid temperature drops.

What weather conditions do you find the spookiest?

Date Created
October 2012

Awards rain down on weather observers

Description

Last week, the Scottish Environment Protection Agency (SEPA) and the Met office honoured some unsung heroes, as Scotland's longest serving rainfall observers were presented with awards at a ceremony in Glasgow.

The event hosted at the city's Royal Concert Hall saw 14 volunteers, from across the country, recognised for their long term contributions to data collection for the national rainfall archive.

SEPA and the Met Office honoured a group of unsung heroes as Scotland's longest serving rainfall observers were presented with their awards in Glasgow.

The volunteers measure rainfall on a daily basis and send the accumulated figures to SEPA to be included in its database and the Met Office rainfall archive.

The observers have clocked up an impressive 509 years service between them!

Among those honoured included Peter Kennedy who has recorded rainfall at the Doonholm gauge in Alloway, Ayrshire, for 37 years, carrying on a family tradition which began back in 1898 – over 114 years ago. Also picking up awards were Jim and Susan MacColl, of Dunlop in Ayrshire, who have recorded rainfall in memory of Mrs MacColl's late brother, Alasdair, a trained meteorologist and dedicated rainfall observer.

James Curran, SEPA Chief Executive, said: "The information the observers collect is crucial to a

number of nationwide services and the awards are a way of showing our appreciation to the longest serving observers. Some have carried out their duties for nearly half a century and we hope they continue to show the same enthusiasm in the service they provide."

Christine Duffy, Rainfall Data Manager of the Met Office, said: "The Met Office and SEPA work closely together throughout the year to help minimise the risk that weather and flooding can bring. The rainfall observers provide an invaluable service to both ourselves and SEPA and this is a fantastic event to recognise their commitment and dedication."

For more information on becoming a rainfall observer, please visit the SEPA website.

Date Created
October 2012